STATE OF CALIFORNIA • DEPARTMENT OF WATER RESOURCES

DWR NEWS | *People*

SPRING 2008

Lancaster Project Headquarters

Mike Huber, Electrical Construction Supervisor, standing inside the pit in front of a 120 inch pipeline for the Penstock Bypass Line Connection at Mojave Siphon Powerplant.

Water Transfers Help in Dry Years
Page 9

Hydrographic Surveys
Page 13

South Bay Aqueduct Enlargement
Page 17

Folsom Dam Project Groundbreaking
Page 20

Several events occurred towards the end of 2007 that are significant for DWR. They are (1) the release of the Blue Ribbon Task Force's Delta Vision report, (2) a decision in the NRDC vs. Kempthorne case (you might know it as the Wanger Decision) on protecting Delta smelt from the SWP and CVP pumps in the Delta, and (3) the Bay Delta Conservation Plan (BDCP) Steering Committee adoption of Points of Agreement around which to build a conservation plan to protect at-risk fish species within the context of broad habitat and natural community conservation principles.

On November 30, 2007, Governor Schwarzenegger's Delta Vision Blue Ribbon Task Force released its vision for the Sacramento-San Joaquin Delta and will complete the strategic plan for achieving its vision by November 2008. The Delta Vision report contains 12 integrated and linked recommendations and seven near-term Delta protection actions, most of which involve DWR. The first recommendation sets the tone for the whole report and states "The Delta ecosystem and a reliable water supply for California are the primary, co-equal goals for sustainable management of the Delta."

On February 28, 2008, Governor Schwarzenegger sent a letter to legislators outlining the Delta Vision recommendations and setting forth actions to be taken by his administration. These actions are of critical importance for Delta sustainability and fall into the following areas: water conservation, water quality, emergency response, ecosystem restoration, water storage, flood protection, climate change, and alternative Delta water conveyance.

DWR is involved in a number of programs to improve the ecosystem of the Delta either through direct habitat improvements (Decker Island; Yolo Bypass and Cache Slough), water quality improvements (Frank's Tract; south Delta operable gates), and flood control (FloodSAFE; Delta Risk Management Strategy (DRMS)). For water supply reliability, DWR is investigating new alternative Delta water conveyance and storage facilities.

DWR is coordinating its efforts with the independent Delta Vision panel and the multi-stakeholder BDCP process to improve the Delta aquatic ecosystem and water supply reliability. New conveyance facilities around the Delta were recognized in the November 2007 BDCP Points of Agreement as the most promising approach to protect at-risk Delta fisheries. More environmentally friendly Delta water conveyance would allow more natural estuary flow patterns, provide the greatest opportunities for benefits from new habitat conservation measures, and help to keep at-risk fish species separate from the effects of the projects' pumps with state-of-the-art fish screens. Detailed environmental review of alternative Delta water conveyance will soon begin as part of the BDCP process. The recently released AB 1200 report summarizes progress made on both the Delta Vision recommendations and the BDCP process.

Federal court judge Oliver Wanger's December 14, 2007 decision in NRDC vs. Kempthorne placed interim remedial measures on SWP and CVP operations to reduce the loss of Delta smelt at the export pumps. The Wanger decision also requires U.S. Fish and Wildlife Service (USFWS) to issue a new Biological Opinion (BO) covering operation of the projects by September 15, 2008. The interim measures are similar to the fish protection actions taken in 2007 under the Environmental Water Account (EWA) program, based on the best available science.

All these events have further highlighted the need to modify the way water is conveyed across the Delta to better protect fish and provide water supply reliability.

We are on the threshold of making some very important progress on "fixing the Delta" and addressing one of California's most intractable water issues.

Jerry Johns
Deputy Director

Related Resources

Delta Vision: **www.deltavision.ca.gov**
Bay Delta Conservation Plan:
www.resources.ca.gov/bdcp
Operations Criteria and Plan (OCAP):
www.usbr.gov/mp/cvo/ocap_page.html
Delta Risk Management Strategy (DRMS):
www.drms.water.ca.gov
FloodSAFE: **www.water.ca.gov/floodsafe**
AB 1200 Report: **baydeltaoffice.water.ca.gov**

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TABLE OF CONTENTS

LANCASTER *Project Headquarters*

By Annie Parker

Located nearly 400 miles south of DWR's Sacramento headquarters and approximately 70 miles north of the City of Los Angeles, the Division of Engineering's Lancaster Project Headquarters is located in the ever-expanding northeast corner of Los Angeles County, where massive Southern California housing developments and expanding industry facilities continue to push further inland towards the high desert.

"The City of Lancaster is starting to become a very popular place to live, but there is still a lot of open space," said **Patty Blake**, Office Technician at the Lancaster office for almost 15 years. "I enjoy living here."

According to Blake, Lancaster Project Headquarters projects vary from large-scale projects, such as the East Branch Extension Phases I and II, to road work, roofing repairs, and the ongoing maintenance of SWP facilities.

Rich Sanchez, Chief of the Division of Engineering, who served almost three years as the supervisor at the Lancaster Project Headquarters, and whose tenure included a significant amount of work on Phase I of the East Branch Extension Project, said that one of the biggest challenges of having an office located so far away from headquarters is maintaining a good level of communication.

"The Lancaster Office is located quite a ways from Sacramento, and it can be difficult sometimes to maintain good contact with the office. When I was supervising the Lancaster headquarters from Sacramento, I would try to visit at least once a week. We try to make sure we meet the needs of all of our employees, even the ones that are located far away," said Sanchez.

The Need for a Field Office

The Construction Office, located in the Division of Engineering (DOE) under the supervision of **Dan Whisman**, Principal Engineer, has three project headquarters offices: The Sacramento Project Headquarters, the Levee Repair Project Headquarters, and the Lancaster Project Headquarters (LPH). DOE's construction offices do work mainly for DWR, but sometimes help out other State and federal agencies through a series of interagency agreements and special programs.

Construction Supervisor Rich Brewer points to the construction of Horsethief Creek Bridge, which is located in the Mojave Siphon area.

"The office was ideally located as a centralized site for construction on the East Branch of the SWP, as well as the West Branch when the major SWP facilities were being constructed."

Bill Ashton,
Supervising Construction Engineer at the LPH

The Sacramento Project Headquarters staff is responsible for the oversight on any State Water Project (SWP)-related construction projects ranging from the Upper Feather River lakes in Plumas County to the Tehachapi Mountains south of Bakersfield, which includes the ongoing South Bay Aqueduct enlargement project. The Levee Repair Project Headquarters was created in 2006 to oversee all construction related to levee repair work, and provided oversight on all DWR emergency levee repair projects completed in 2007. The Lancaster Project Headquarters Office, the smallest of the DOE's Project Headquarters, oversees construction projects located south of Bakersfield well into Riverside and the San Bernardino Mountains. LPH is located at a mid-way point of the SWP East Branch facilities.

"The office was ideally located as a centralized site for construction on the East Branch of the SWP, as well as the West Branch when the major SWP facilities were being constructed," said **Bill Ashton**, Supervising Construction Engineer at the LPH.

During the initial construction phase of the State Water Project, DWR's construction headquarters for work from Castaic Dam to Lake Perris was in an old Palmdale skating rink leased by the Department.

As East Branch projects moved toward completion, most of the staff moved to the Pearblossom Operations and Maintenance (O&M) Subcenter, leaving those remaining in the skating rink with a building too large and costly for their needs.

All staff members were reunited in a new headquarters in Lancaster in 1979, then moved to another building in Lancaster in 2006. **Paul Benavidez** from DOE's headquarters in Sacramento and Patty Blake of LPH, with assistance from former LPH employee **Patricia Wordsworth**, **Pat Cannedy** from Facilities Management, **Wilma Ortiz** from the Telecommunications Office and **Jill Sommerville** from the Department of General Services were all heavily involved in this move which lasted a little under a year.

"Our Lancaster Project Headquarters inspectors had the dirty job of cleaning the storage sheds in our old LPH office before we moved. It was much appreciated," said Blake.

At the Penstock Bypass Line in the Mojave Siphon Powerplant, a 36 inch corrugated metal pipe was removed.

Lancaster Project Headquarters

Above: (Left to Right) Construction Supervisor II Dyanna Laing, Electrical Construction Supervisor I Mike Huber, Office Technician Patty Blake.

Below: (Left to Right) Back: Lancaster Project Headquarters staff includes Jim Brantley, Chief Bill Ashton, Patty Blake, Mike Huber, Dyanna Laing. Front: Nady Said and Sherry McCauley.

About the Office

LPH employees work in the field on a variety of projects, which according to Construction Supervisor **Rich Brewer** range from earthwork to concrete work, to steel and structural steel work, and on a number of different projects at various stages of completion. As opposed to DWR's Operations and Maintenance field offices, whose main job is to operate and maintain SWP facilities, DOE's project headquarters and field offices work on any number of construction-related issues in the area.

Lancaster Project Headquarters



As with the other project headquarters offices in DOE's Construction Office, Lancaster staff is responsible for ensuring that contracts are done on time, keeping track of construction work in regards to payments, and providing quality control and assurance construction inspection of projects, as well as the ongoing monitoring.

"One of the advantages of having project headquarters and field offices is that you have folks who live in the general area that are close to where the work is occurring," said Sanchez. "Not only is this more cost-effective than sending staff from Sacramento to make daily site inspections, but staff is able to monitor construction projects much more closely and respond to construction emergencies more quickly than they could from a centralized location in Sacramento."

Current LPH projects include seismic retrofitting and upgrading of numerous SWP facilities, including the Mojave Siphon Bypass Project, the replacement of deficient sections of pre-stressed concrete cylinder pipeline along the Peace Valley Pipeline on the West Branch and the Santa Ana Pipeline on the East Branch, and mitigation work at Lake Perris.

"With the large amount of development that has been going on in the area, our Lancaster office oversees non-DWR construction work that requires an encroachment permit," said Sanchez. "New development often ends up encroaching on our SWP facilities, and new utility lines and other appurtenances are run across or adjacent to our right-of-way. We want to make sure that these projects do not impact the structural integrity of our facilities."

Ongoing Projects

One of the major ongoing projects for LPH is the East Branch Extension Project. This extension starts at the end of the Foothill Pipeline downstream of DWR's Devil Canyon Pumping Plant on the East Branch. Here, SWP water is diverted further east towards Riverside County via the East Branch Extension's facilities. Water is pumped from DWR's Greenspot Pump Station, to the Crafton Hills Pump Station, then into Crafton Hills Reservoir. From Crafton Hills the water flows to DWR's Cherry Valley Pump Station, where it reaches the Cherry Valley area as its terminus.

In 2003, Phase I of the East Branch Extension of the StateWater Project was completed. This extension, which included the construction of a number of conveyance facilities, miles of pipeline, the Crafton Hills Dam and Reservoir and three separate pump stations, was designed to deliver water to communities in San Bernardino County and the Cherry Valley area. Completion of this project brought the first SWP water to the San Gorgonio Pass Water Agency (SGPWA), one of the original SWP Contractors. Currently, the SWP water is being sent to spreading basins to recharge aquifers.

Phase I of the extension covers only about half of the San Gorgonio Pass Water Agency's service area, where SGPWA customers in the eastern area depend on dwindling groundwater supplies, and in the nearly four years after the completion of this project, the development in San Bernardino and Riverside counties has continued to grow tremendously. Phase II of the East Branch extension project is underway, with the goal to supplement the water supply of two main

***Above**: (Left to Right) Construction Supervisor I Nady Said, Supervising Engineer Jim Brantley, Office Technician Sherry McCauley.*

Below: Rich Brewer stands in front of Horsethief Creek Bridge. The bridge will provide DWR all-weather access to Check Site #66.

SWP water contractors, SGPWA and San Bernardino Valley Municipal Water District. Much of the new construction work, which includes building new pipelines, a new reservoir, new pumping station, and the enlargement of an existing pumping station and reservoir, will be administered from LPH. Phase II is estimated to cost approximately $200 million.

"We are currently engaged in the preliminary engineering and environmental permitting, and we hope to get started on the final design in the next two years," said Sanchez.

The Lancaster office also is expecting to administer oversight for the Perris Dam remediation project, expected to start next year, as well as support the project to replace pumping units at the Edmonston Pumping Plant.

In the Field

Rich Brewer has been involved in inspection work for 15 years and says he loves to work in the field.

"Being in inspection, you have to go where the work is," said Brewer. "I wouldn't have it any other way."

Brewer's service area includes a large portion of Southern California, and he has worked as far north as the Bakersfield area, where he spent several weeks working at the Lost Hills Pumping Plant.

Brewer joined DWR eight years ago at the Lancaster office, where he worked in the Crafton Hills Pumping Station, the largest of three stations that were constructed during Phase I of the East Branch Extension. He spent three years on that project, and did additional work on several other jobs. He currently is the lead inspector on work being done at Horsethief Creek Bridge near Silverwood Lake.

"At the bridge, we have completed constructing the concrete columns and bridge sections and we are in the process of completing some road work and a little touch-up painting of the bridge steel," said Brewer.

Brewer has also done work as required on SWP facilities, including retrofitting stoplogs and radial gates and adding new features to the SWP aqueduct.

"I have reviewed x-rays of welds in the inspection of structural steel to roof construction to excavations to backfills to a little bit of everything," said Brewer.

Although Brewer enjoys the remoteness of his work, being so far away in the field can be difficult to have access to required information.

"The biggest challenge for me about working in the field is information technology issues," said Brewer. "When you can't get back to the office or go online, it can be difficult to get some work done, especially when there's no IT person around."

Lancaster Project Headquarters

Future Office Plans

There are plans to move the LPH office into a not-yet constructed building at the Pearblossom sub-center about 30 miles away. This will keep staff members close to where they need to be, and place them in a facility with access to other DWR services, including mobile equipment.

"It just makes more sense to have both O&M and DOE staff in the same area," said Sanchez. "We often have to coordinate with O&M to make sure our construction schedules are compatible with their operations and this will help facilitate that type of communication in addition to cooperatively sharing and maximizing our resources." ■

Above: *Tehachapi East Afterbay's Turnout Structure during construction. Lancaster Project Headquarters staff assisted with the Tehachapi East Afterbay Project, which was completed in 2007.*

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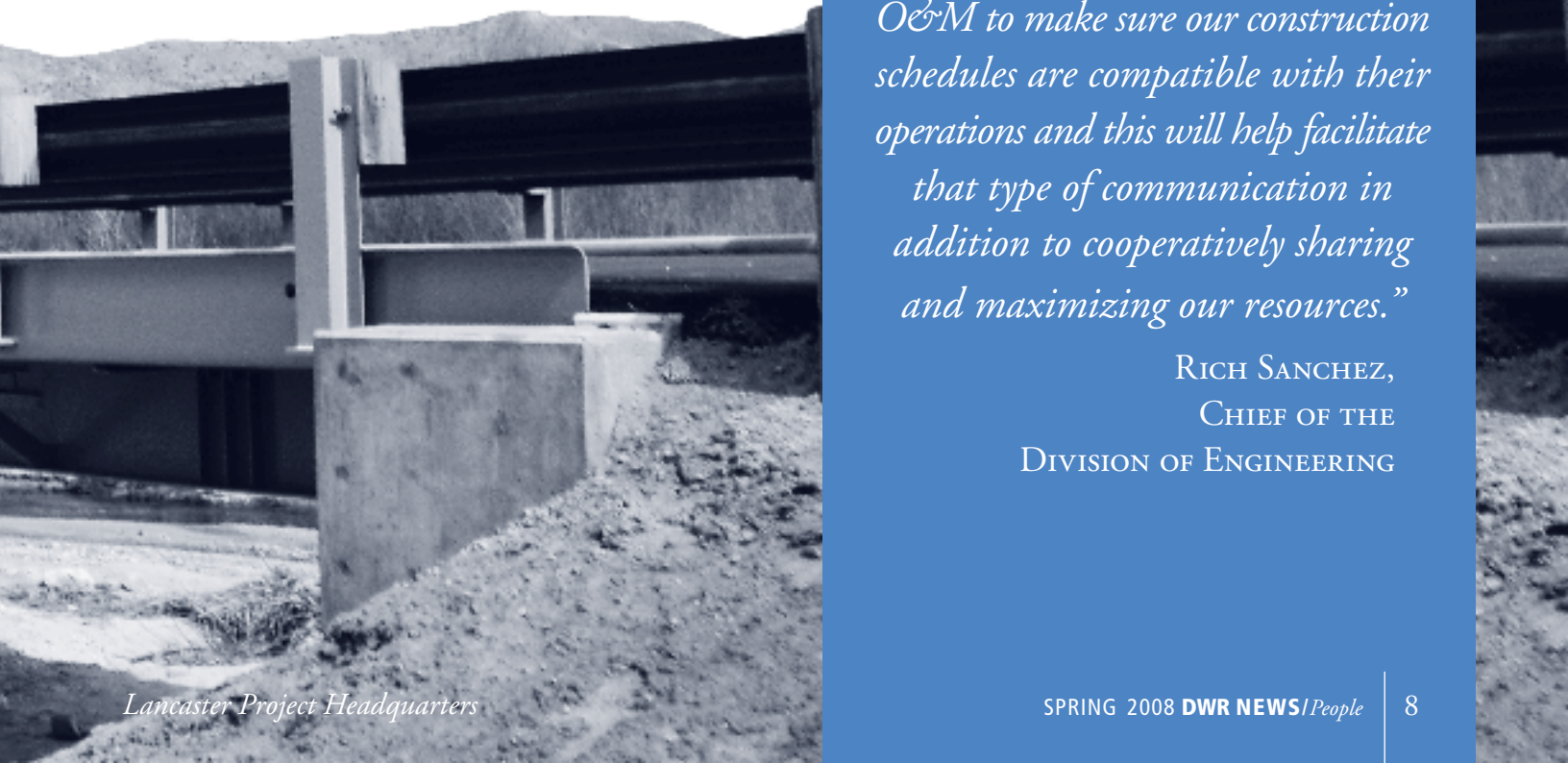
Rich Sanchez,
Chief of the
Division of Engineering



Lancaster Project Headquarters

WATER TRANSFERS

Prove Helpful in California's Dry Water Years

By Pete Weisser

Whenever California experiences a long stretch of dry weather, the topic of water transfers heats up. This article provides a concise update on California water transfers, using that phrase to describe specially arranged water transactions outside the routine allocation processes.

After a very dry water year in 2007, especially in parched Southern California, and with a Federal judge's Delta smelt ruling expected to reduce Delta exports, water transfers are back in the spotlight. As 2008 began, water managers scrambling to assure adequate supplies turned to transfers.

The Metropolitan Water District of Southern California (MWD) announced plans to obtain Yuba County Water Agency water for what a MWD executive calls an "insurance policy" for water supplies for MWD's 18 million consumers. MWD wants to buy up to 35,000 acre-feet in dry years over the next 18 years from the Yuba County Water Agency. MWD also seeks, through one-year transfer agreements, to secure up to 200,000 acre-feet from Central Valley water agencies.

"We are interested in obtaining an insurance policy, so to speak," explained MWD Chief Operating Officer **Debra Man**.

"We are interested in obtaining an insurance policy, so to speak,"

Debra Man
MWD Chief Operating Officer

Buyers Seeking Water Sellers

DWR water transfer expert **Dean Reynolds** estimated that as 2008 began water agencies were in the market for up to 300,000 acre-feet in water transfers from Sacramento Valley sources. Most potential sellers are agricultural districts, which as a rule have about four times as much water as urban districts.

Water managers did not wait for snow season surveys to assure that they have some extra water on tap.

"We are already dipping into our reserves," stated MWD spokesman **Denis Wolcott** last November. "We have to start to look ahead to 2009 and protect ourselves against a major catastrophe."

MWD is a seasoned veteran at water transfers, dating back to a 1988-89 transfer deal on Colorado River water with Imperial Valley. Water historian Norris Hundley says MWD "led the pack" in such water marketing ventures. In 2003, it purchased about 150,000 acre-feet from Sacramento Valley sellers.

As 2008 started, Southern California agencies realized they face potentially low SWP deliveries while the Colorado River, another major source of supply, is in the eighth year of a drought.

Basic Transfer Concepts

Water transfers are voluntary transactions between willing sellers and interested buyers, subject to review by the State Water Resources Control Board and conducted in accord with three basic Water Code principles:

- The transfer may not result in injury to another legal water user.
- It must not unreasonably affect fish, wildlife or other instream beneficial uses.
- Transfers may not cause unreasonable economic impacts in the county from which water is moved.

Over the years, DWR has helped broker or develop more than 400 water transfers. Its Water Transfer specialists have gained expertise in many aspects of water transfer policy. Agencies and individuals interested in water transfers are welcome to contact Dean Reynolds in the Office of Water Use Efficiency and Transfers for advice and information. Dean's phone number is (916) 651-7055 and his email address is: **dreynold@water.ca.gov**

Milestones in Water Transfers

Stimulated by California's last major statewide drought in 1987-1992 and by water supply problems during the 1990s, water transfers arose as innovative solutions to dry year water challenges. They quickly gained acceptance in the water community as valuable mechanisms to meet short-term drought or special supply needs.

During the 1987-1992 drought, DWR was a leading agency involved in improvising and developing water transfers and water banking to cope with a prolonged drought and dramatically shrunken SWP allocations.

In the peak drought year of 1991, DWR facilitated the purchase of more than 820,000 acre-feet of water for the State's Drought Water Bank to help alleviate expected water shortages.

During the 1980s and 1990s, the Legislature passed several laws making it easier to transfer water beyond historic boundaries of water service areas, reported Deputy Director **Jerry Johns**.

While a staff member at the State Water Resources Control Board, prior to joining DWR, Johns served as an expert reviewer of proposed water transfers.

Passage of the Central Valley Project Improvement Act (CVPIA) in 1991 opened the way for water users within the federal Central Valley Project to make transfers.

In 1995-1996, the Monterey Agreement enabled California's State Water Project to change its rules to allow banking and some water transfers among SWP users.

During the early 2000s, the CALFED Bay-Delta Program was highly active in water transfers. Transfers among CALFED agencies, or approved by them, averaged about 500,000 acre-feet per year. Its most publicized innovative transfer program was the Environmental Water Account (EWA). The EWA was created to meet two related challenges: declining fish populations and unreliable water supply activities, some of which were motivated by a desire to protect special fish populations.

> *"Every year hundreds, perhaps thousands, of water transfers take place between water users within water districts,"*
>
> Jerry Johns

Typical Transfer Activities

Today, transfers are a well-established and valuable tool, familiar to California's water resource managers.

"Every year hundreds, perhaps thousands, of water transfers take place between water users within water districts," reported Johns.

Most transfers within or between water districts, especially south of the Delta, are routine, exciting little media interest. But big ones and drought-year deals, tend to draw headlines, such as the Southern California 2003 ag to urban transfer from Imperial Valley agricultural use to urban San Diego.

Transfers enable thirsty agencies to acquire significant water supply security, especially in dry or regional drought years, while providing a fiscal benefit to willing sellers.

Water transfers can benefit the sellers' communities economically.

"For example, the Yuba County Water Agency has used over $10 million from the proceeds of water transfer sales over the past several years to fund badly needed flood control projects for the county," stated Johns.

Transfers Meet Special Needs

Still, transfers account for only about three percent of California's total use of developed water, as documented in DWR studies and a 2003 report by the Public Policy Institute of California (PPIC).

While well-established, they are statistically rare, compared to more prosaic water transportation commitments.

Tried and found useful over decades, transfers are seen as "playing an increasingly important role in California's future," according to a 2005 Water Education Foundation publication on water marketing.

Their real value lies in meeting the special needs of water users at crucial times of short supply.

Agricultural water districts, particularly in Northern California, are key sellers of water, but also major buyers, as well. Despite popular images of farm water being bought up for Los Angeles swimming pools, about half of all water transfers are agricultural district to agricultural district. About one-quarter are from agricultural districts to urban agencies.

More Transfer Information

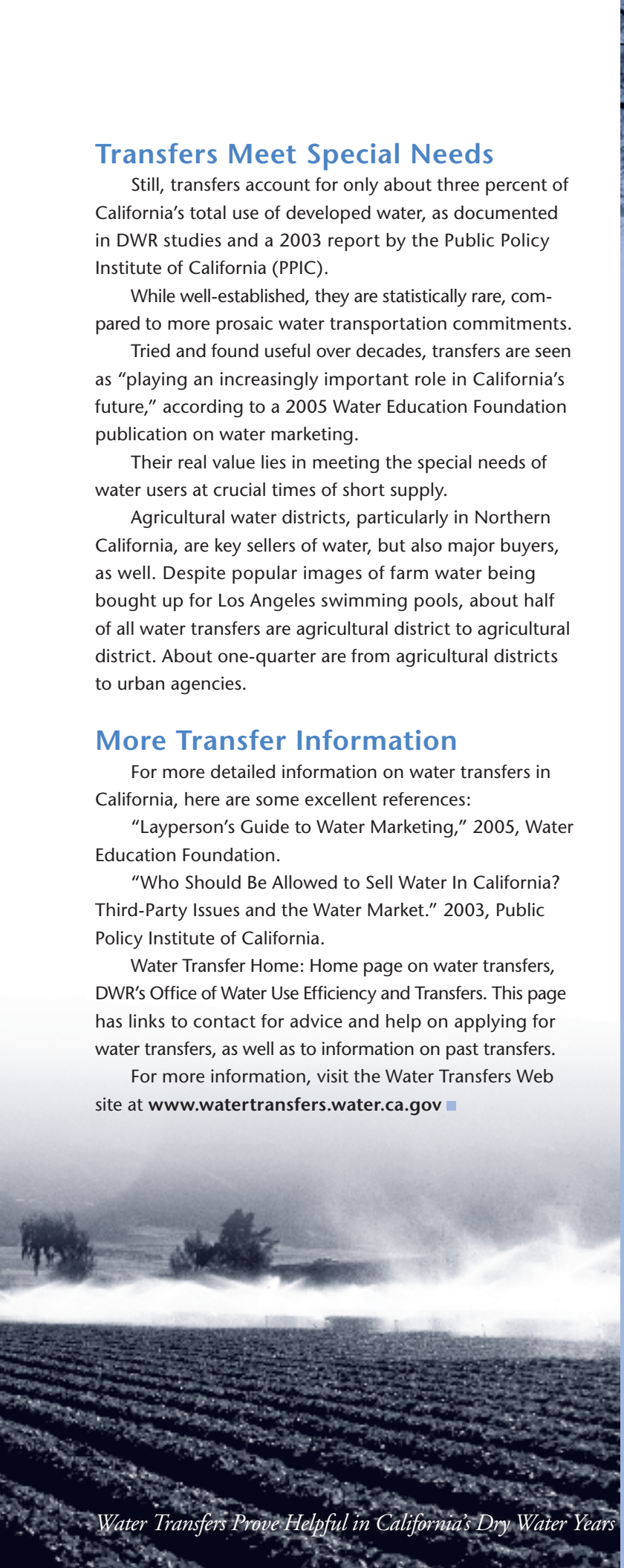
For more detailed information on water transfers in California, here are some excellent references:

"Layperson's Guide to Water Marketing," 2005, Water Education Foundation.

"Who Should Be Allowed to Sell Water In California? Third-Party Issues and the Water Market." 2003, Public Policy Institute of California.

Water Transfer Home: Home page on water transfers, DWR's Office of Water Use Efficiency and Transfers. This page has links to contact for advice and help on applying for water transfers, as well as to information on past transfers.

For more information, visit the Water Transfers Web site at **www.watertransfers.water.ca.gov** ■



Water Transfers Prove Helpful in California's Dry Water Years

WHAT DOES THE FUTURE OF WATER TRANSFERS IN CALIFORNIA LOOK LIKE?

By Dean Reynolds

Water transfers are considered one of many tools available for water managers throughout the State of California. During times of water shortage water transfer from Northern California, through the Sacramento-San Joaquin Delta, then south has been the primary method of water transfer in California. The continued fate of such transfers is intimately tied to the ultimate "Delta fix" that is implemented. The amount of water available for transfer from north to south will depend on the capacity to move water and the amount of water available in excess of local and environmental needs. As increased storage, surface and/or groundwater, is made available downstream of the Delta, water transfers to those storage facilities will potentially occur in all hydrologic year types, capitalizing on available excess water in average and above average years.

Due to potential long-term decreases in the amount of water that can be moved from north to south, we may also see more interest in water purchases from agriculture in the San Joaquin Valley. Pumping restrictions in 2007 prompted potential buyers to open dialogues with San Joaquin Valley interests. We expect those discussions to continue into the future.

Anticipate a growing number of water transfers used to provide reliable water supplies for future development to meet the needs of a growing California population. These transfers could be paid for by developers who then pass on the water to a public water agency that serves the community.

Long-term water purchase contracts will likely become more common in the future. Once long-term contracts are in place, they will facilitate prompt and relatively simple water transfers when the need arises, without the lengthy negotiations required every time a new short-term transfer is proposed.

Water transfer is expected to remain an important water management tool well into the future. How the water transfer market matures depends greatly on the solutions implemented to deal with all of California's water issues. ■

DWR Conducts
HYDROGRAPHIC SURVEYS

By Amy Norris

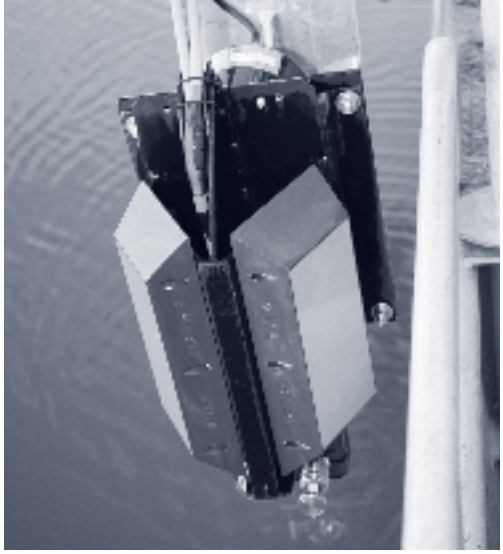
Managing and evaluating the state's levee system has become a high-tech air, land and sea operation. Two years ago, heavy rains and the threat of flooding exposed many weaknesses in the Central Valley's levee system. When the true fragility of the system became apparent, **Governor Schwarzenegger** responded with a February 2006 proclamation that declared a state of emergency for California's levee system. He later issued two executive orders to further expedite repairs and evaluations along Central Valley riverbanks.

Executive Order S-18-06 in October 2006 called for additional studies to find underseepage and erosion that could cause a levee failure. That order changed the nature of DWR Engineer **Scott Woodland**'s job. Since spring of 2007, Woodland has been working collaboratively with URS Corporation and private surveying firms to help create detailed maps of Central Valley levees like we've never seen before. According to Woodland, much of the technology being used in today's surveys was developed in the last half dozen years.

First low-flying helicopters using LiDAR (Light Detection and Ranging) technology conducted topographic surveys of more than 300 miles of levees from Oroville to Lathrop. Woodland worked with the surveyors and URS to determine how to get the best cross section of levees, and deliver the information in an understandable way. "I spend a lot more time with local representatives of reclamation districts, counties, and in some cases developers, because they're very concerned about what's going on with the levees," says Woodland.

Historically, one of the greatest problems facing reclamation districts and the Corps of Engineers when conducting levee evaluations was the cost. Woodland jokes, "Weaknesses were discovered in the past when something broke." Woodland says Governor Schwarzenegger has provided enough money to conduct a complete, and preemptive, evaluation. "Nobody's been this comprehensive before. We're going to close the loop and make sure the levees are tall enough and determine the foundation condi-

Hydrographer Annick Tardif monitors data aboard the Julie Ann.



Hydrographer Trish Mouton lowers sonar equipment into the water. At right, multi-beam sonar device used in survey. ***Bottom:*** *Survey boat Julie Ann equipped with multi-beam sonar sweeps Sacramento River.*

tions so that we can find weak areas. We're going to develop the concepts of how we might fix those problems. We're going to strategize what are the biggest problems and invest the money to protect the most people with most benefit."

Bathymetric surveying is the most recently completed evaluation now part of the Department's investigative arsenal. The technique involves lowering a multi-beam sonar device into the water from a specially equipped boat to create an underwater contour map of where the levee walls meet the riverbed.

Gilbert Suarez knows bathymetric surveying well, serving as a field project manager and hydrographer with Fugro West, Inc. in Oakland. For 18 years his work has taken him from Alaska to Central America. He has been head of the survey operation in the Central Valley since it began in December 2007, covering portions of the Sacramento, San Joaquin, American, and Calaveras rivers, and French Camp Slough.

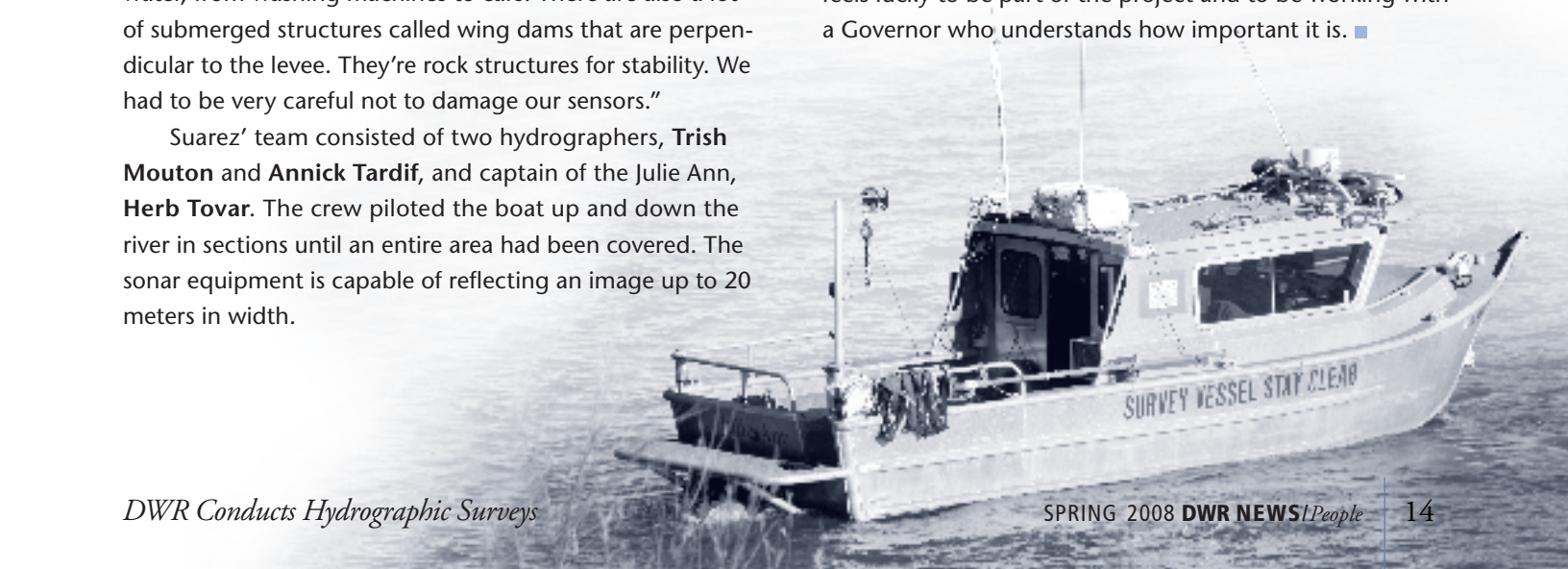
Despite some of the exotic locales Suarez has visited, our California rivers presented some interesting challenges. "This job was unique because there was a big flow of debris in the water, from washing machines to cars. There are also a lot of submerged structures called wing dams that are perpendicular to the levee. They're rock structures for stability. We had to be very careful not to damage our sensors."

Suarez' team consisted of two hydrographers, **Trish Mouton** and **Annick Tardif**, and captain of the Julie Ann, **Herb Tovar**. The crew piloted the boat up and down the river in sections until an entire area had been covered. The sonar equipment is capable of reflecting an image up to 20 meters in width.

According to Suarez, it's the same as surveying on land, but with the highly complicating factor of water. "When you're in a boat, there's heave, pitch, roll and yaw." Sensors automatically record these variables, and apply speed of sound and tidal water quality to come up with data that accurately maps the contour of the riverbed. After data is processed, an "x,y,z" bin grid is mapped at every meter of surveyed riverbottom.

The bathymetric data will be combined with the LiDAR data to create topographic maps of hundreds of miles of levee contours from which levee cross-sections can be developed for stability and seepage analysis models. Those models will also use data about the soil collected by the on-going drilling program and the Helicopter Electromagnetic (HEM) Surveys that were conducted in the fall. The drilling and HEM record density and determine materials from which levees are constructed. This information will help engineers determine where additional drilling and further repairs will be necessary.

Next, evaluations will go beyond urban areas to 1,600 miles of levees that protect agricultural land and less populated regions. Woodland speculates the current levee evaluation project funded through Propositions 1E and 84 will be completed in three to five years. In the future, levee evaluation work may focus on emergent communities. Woodland feels lucky to be part of the project and to be working with a Governor who understands how important it is. ■



Governor Schwarzenegger signs

FLOOD PROTECTION LEGISLATION

During the fall of 2007, **Governor Arnold Schwarzenegger** signed six bills into law to improve flood protection for Californians.

"I have always said public safety is my number one priority, and the package of bills I am signing today will tremendously strengthen flood protection in California," said Governor Schwarzenegger. "California's Central Valley has thousands of miles of levees protecting millions of residents and we expect millions more in the coming decades. We want to make sure the tragedies of Hurricane Katrina do not happen here if there is an earthquake or other natural disaster. That is why we will establish 200-year flood protection as the standard for urban developments in the Central Valley so our growth will be safe growth."

The October 10 bill signing in South Natomas was attended by a diverse group of stakeholders, including State and local officials, environmentalists, and builders.

The legislative package will lead to the development of a comprehensive Central Valley Flood Protection Plan. It also reformed the Reclamation Board (now the Central Valley Flood Protection Board) to improve efficiency, requires cities and counties to increase consideration of flood risks when making land use decisions, and creates a new standard in flood protection for urban development.

"Last year, Californians made the commitment to invest nearly $5 billion to secure our levees when we passed Propositions 1E and 84. Today's bills are the next step in ensuring a safe future for our state," said the Governor.

In May of 2006, the Governor signed AB 140 , the $4 billion levee repair and flood control bond element of the Strategic Growth Plan that California voters approved to fund

Governor Schwarzenegger signs legislation to strengthen flood protection in California.

urgent repairs and essential improvements of levees and other flood control facilities in the Central Valley and Sacramento-San Joaquin Delta. These funds will also leverage federal and local dollars to fund flood management projects and improve disaster preparedness. Schwarzenegger also signed AB 142 that appropriated $500 million from the General Fund to the Department of Water Resources for levee evaluation and repair.

In February of 2006, the Governor declared a State of Emergency for California's levee system and ordered that the Department of Water Resources develop a plan to begin immediate repairs to prevent catastrophic flooding and loss of life. The Governor's emergency declaration allowed state agencies to begin repair work immediately by fast-tracking State environmental permits and utilizing emergency contracting procedures. As a result and with funding from AB 142, 33 of the most vulnerable levee sites in Northern California were repaired.

"I have always said public safety is my number one priority, and the package of bills I am signing today will tremendously strengthen flood protection in California."

GOVERNOR SCHWARZENEGGER

Addressing Flood Control, Water Needs

With his initiatives to upgrade California's aging levee system already under way, Governor Schwarzenegger's proposed budget includes another $598.3 million from Proposition1E and Proposition 84 bond funds for flood control needs. The Governor also is proposing $350 million for regional water projects to increase water supplies, encourage conservation, improve quality and meet other goals. And, the proposed budget earmarks $100.5 million in local assistance funding for the State Water Resources Control Board to continue water quality programs to keep the state's beaches, drinking water and agricultural water supplies clean. ■

IN 2007
THE FOLLOWING BILLS WERE SIGNED INTO LAW:

- **AB 156** by **Assembly member John Laird** (D-Santa Cruz) – Changes various provisions of the Water Code related to operation of the state-federal flood control projects in the Central Valley.
- **SB 5** by **Senator Mike Machado** (D-Linden) – Requires the Department of Water Resources and the Central Valley Flood Protection Board (formerly the Reclamation Board) to prepare and adopt a Central Valley Flood Protection Plan by 2012, and establishes flood protection requirements for local land-use decisions consistent with the Central Valley Protection Plan.
- **AB 162** by **Assembly member Lois Wolk** (D-Davis) – Requires cities and counties to address flood-related matters in the land use, conservation, safety, and housing elements of their general plans.
- **SB 17** by **Senator Dean Florez** (D-Shafter) – Reforms and renames the Reclamation Board to improve proficiency, and requires development of State Plan of Flood Control for the Central Valley.
- **AB 70** by **Assembly member Dave Jones** (D-Sacramento) – Provides generally that a city or county may be required to contribute a fair and reasonable share of property damage compensation due to flooding following the failure of a state flood control project when, prior to the failure, the city or county increases state exposure to liability by unreasonably approving developments.
- **AB 5 Assembly member Lois Wolk** (D-Davis) – Makes changes to the preceding bills.

For more information visit:
http://gov.ca.gov/index.php?/press-release/7661/

SOUTH BAY AQUEDUCT

Enlargement Project

By Amy Norris

Since 2001, the Department has been working to improve and enlarge the South Bay Aqueduct which serves communities in Santa Clara and Alameda counties.

This was the State Water Project's first water delivery facility, with the initial phase completed in 1965. The South Bay Water Contractors, comprised of the Alameda County Flood Control and Water Conservation District (Zone 7), Alameda County Water District, and Santa Clara Valley Water District, receive much of their water supply from the State Water Project delivered through the South Bay Aqueduct. The region is highly populated with over two million people depending on SWP deliveries for their urban and industrial usage. The South Bay Water Contractors contracts for a maximum Table A amount of 222,619 acre feet per year.

In fall of 2007, South Bay Pumping Plant enlargement's construction included pumping plant expansion in the foreground and skeleton of new Service Bay Building in background to the right of the existing South Bay Pumping Plant.

For various reasons, including deterioration from over 40 years of use, portions of the South Bay Aqueduct could not deliver water at its original design capacity of 300 cubic feet per second (cfs). Improvements were needed to increase the pumping capacity at South Bay Pumping Plant (SBPP), to provide adequate canal freeboard (the space necessary between the water and the top edge of the canal) to increase delivery reliability, and to reduce the risk of contamination of the water supply. The initial phase of rehabilitating the existing system was completed in 2004.

In order to meet growing demand, Zone 7 requested an expansion of delivery capacity from 300 cfs to 430 cfs. When completed, the expansion along the first 16 miles of the South Bay Aqueduct will provide the water district with additional reliability and water quality enhancement. The extra 130 cfs will provide the water district with its long-term raw water conveyance capacity in accordance with its water supply master plan programmatic Environmental Impact Report (EIR) 1999.

DWR Engineer Kevin Gray consults with DWR Construction Supervisor Will Hicks (right) regarding placement of new 78-inch diameter pipe along the Discharge Line and Brushy Creek Pipeline No. 3 alignment.

Despite some obstacles, progress has been made on the expansion project. According to **Paul Strusinski**, Senior Engineer with the Division of Engineering, "Construction over the last year of the pipeline and the pumping plant has continued through difficult weather, environmental conditions and delays in pipe deliveries."

Completing this expansion project has become even more important in light of the federal court decision issued by Judge Oliver Wanger that periodically restricts pumping to protect Delta smelt. When pumping is permitted at full levels, the South Bay Water Contractors will receive full deliveries to replenish possibly depleted reservoirs and ground water basins relied upon during pumping restrictions.

The construction of Dyer Reservoir approximately four miles downstream of the South Bay Pumping Plant was another component of the expansion project requested by Zone 7. The reservoir will provide short-term storage for a new water treatment plant Zone 7 plans to construct over the next three years. The original request of 100 acre-feet of storage has grown to 425 acre-feet, 200 acre-feet that will allow a continuous supply of untreated water to Zone 7 customers in the event that the South Bay Pumping Plant experiences a short-term outage for up to a few days during high demand periods, and 225 acre-feet to reduce on-peak pumping at SBPP.

Work on several construction contracts was delayed for some time because of environmental permits. Completion of the entire expansion project was originally expected by 2008, but 2010 is now the scheduled completion date. This delay will result in an additional $30 million to fund the project. However, progress is being made on obtaining

"Construction over the last year of the pipeline and the pumping plant has continued through difficult weather, environmental conditions and delays in pipe deliveries."

Paul Strusinski,
Senior Engineer with the
Division of Engineering

Pipeline Contractor moves a section of 78-inch diameter steel pipe towards the pipe trench. The pipe segment's capped ends keep the cement mortar lining from drying out during transport and storage.

the necessary environmental permitting and finalizing two conservation easements, one downstream of Bethany Reservoir and the other near the new Dyer Reservoir site.

Despite the frustration of delays, work has continued as efficiently as possible. "We're making good progress, and though we're behind schedule, when we are able to do the work, the contractors have been willing to put forth the effort and keep as much of an on-time schedule as possible," said **Doug Thompson**, Water Services Supervisor, Delta Field Division.

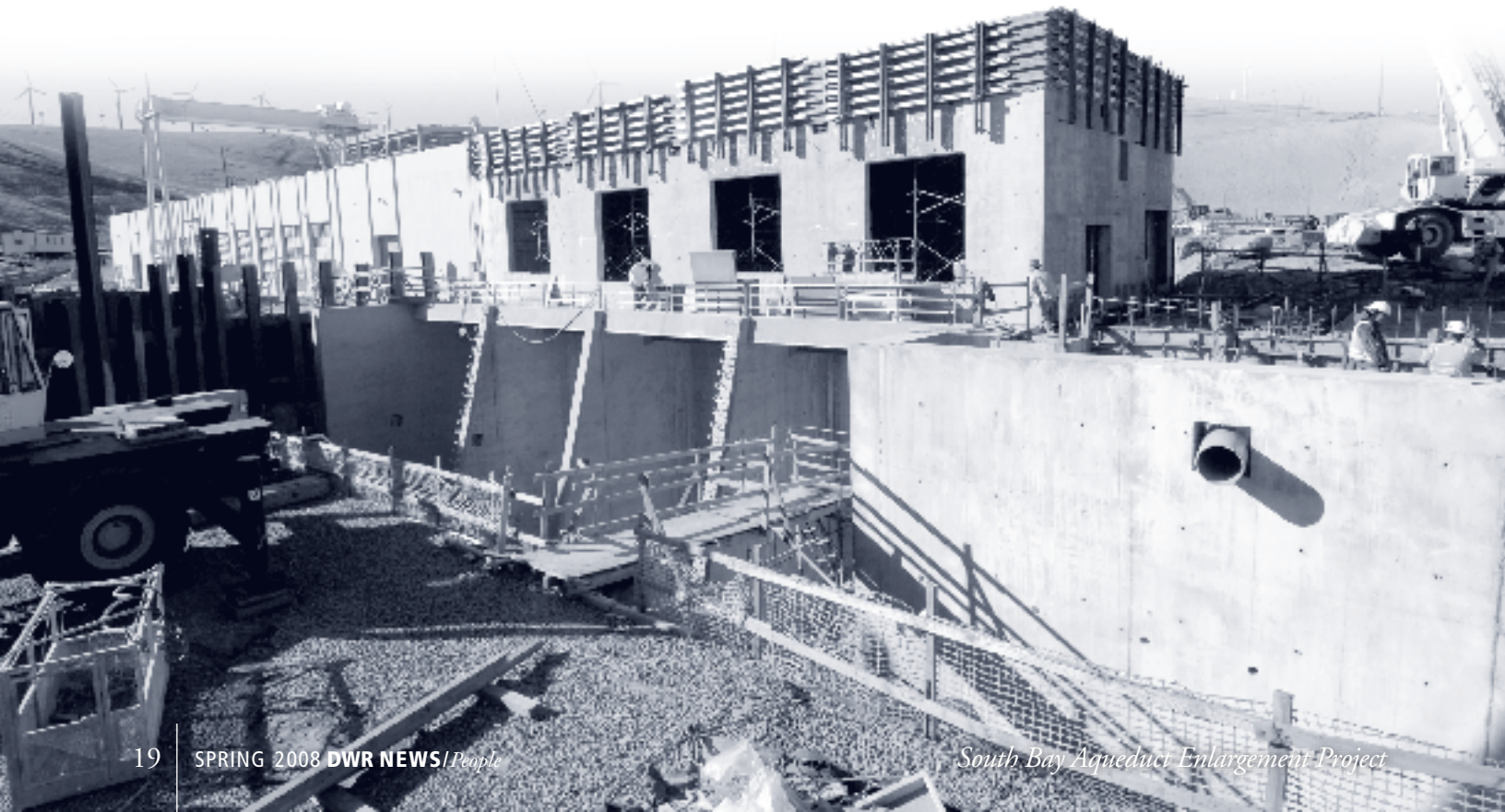
Thompson is also pleased with how well various agencies have worked together. "There have been a lot of coordinating efforts between the Department and the three South Bay Water contractors with the scheduling for water outages and shutdowns in order to complete the work. There have been minimal impacts when outages were necessary because of the advance planning."

The total cost of the South Bay Aqueduct Project is now estimated at about $173 million, according to **Terry Becker**, Program Manager in the Division of Engineering's Pipelines and Structures Section. Component costs are: $121 million for enlargement, $35 million for improvement, and $17 million for off-peak pumping.

As noted in the Environmental Impact Report, Zone 7 will pay for the entire cost of the enlargement. Improvement work was funded by all three South Bay Water Contractors, and costs and benefits related to off-peak pumping will be shared by all State Water Project Contractors. ■

***Above**: (Left to Right) Discharge Line and Brushy Creek Pipeline No. 3 construction, facing east. The new pipeline is 3.78 miles of steel and concrete pipe. DWR Engineer Kevin Gray inspects newly welded steel pipe internal circumferential weld. Contractor's welder welds external circumferential weld. New South Bay Pumping Plant Discharge Manifold.*

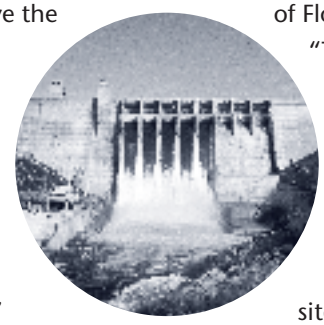
***Below**: With existing pumping plant at left, the South Bay Pumping Plant Enlargement Project includes new intake retaining wall at right. The new plant will have four pumps, as can be seen due to the four intake bays and four wall openings.*



FOLSOM DAM *Project Groundbreaking*

On January 11, **Governor Arnold Schwarzenegger**, U.S. Secretary of the Interior **Dirk Kempthorne**, Resources Secretary **Mike Chrisman**, and DWR Director **Lester Snow** joined other dignitaries for a groundbreaking ceremony kicking off the $1.3 billion Folsom Dam Joint Federal Project.

The Joint Federal Project (JFP) includes a new spillway to increase reservoir release capacity and improve the capability to regulate flood inflows. The JFP is designed to pass a 200-year storm series (one that has a half-percent chance of occurrence in any year) safely through the Sacramento area's flood control system. This project essentially doubles the existing flood protection, and is a significant improvement for a community long-recognized as one of the nation's most "at-risk" from flooding.



"This project is a fantastic example of federal, state and local officials working together to protect people," said Governor Schwarzenegger. "It will allow us to react more quickly to heavy river flows and withstand bigger storms. Families will sleep more soundly beneath the added security Folsom Dam provides. This is a tremendous victory for the entire region and for the safety of Californians."

The project is funded through a combination of federal, state and local programs, including $167 million from Proposition 1E, a major component of the Governor's Strategic Growth Plan.

Lead agencies in the dam improvement project are the U.S. Bureau of Reclamation and the U.S. Army Corps of Engineers. Local sponsors are the Central Valley Flood Protection Board (formerly The Reclamation Board), and the Sacramento Area Flood Control Agency.

"Since the Corps is responsible for design and construction of the project, the State's role is to supply funding and, if required, real estate," said **Robert Charney** of DWR's Division of Flood Management Project Development Branch. "The State is represented by the Central Valley Flood Protection Board and, along with taking steps to make sure that CEQA is met, the State takes a seat at the design table to be sure that the interests of Californians are met."

Scheduled for completion in 2015, the JFP's new spillway will be located at the current overlook site and will include a 1,000-foot-long approach channel, a concrete control structure (including six submerged flood gates), a 3,000-foot- long spillway chute, and a stilling basin. The new spillway's control structure will operate in conjunction with existing Folsom Dam spillway gates to facilitate flood releases into the Lower American River.

"This project is a monumental step toward reducing the flood risk for Sacramento and an integral part of a larger flood protection system that saves lives and protects valuable property in the Sacramento Region," said Charney. ■

Governor Schwarzenegger with U.S. Secretary of Interior Dirk Kempthorne spoke during the Folsom Dam Project Groundbreaking ceremony. Folsom Dam, located about 25 miles east of downtown Sacramento, provides flood protection for the Sacramento area.

City of Yuba City

Yuba City, one of the Northern California State Water Project Contractors, is celebrating a major milestone this year…its 100th birthday.

Incorporated as a city on January 23, 1908, the farming community 45-miles north of Sacramento is the governmental seat of Sutter County and the principal municipality of the Yuba City Metropolitan Statistical Area, which encompasses all of Sutter and Yuba counties. As of January 1, 2006, the city had a total population of 62,083, while the metro area's residents numbered 165,080.

The city's Department of Utilities Water Division became a State Water Project (SWP) contractor in 1984. Its maximum annual entitlement of 9,600 acre feet per year makes it the seventh smallest contractor among the 29 agencies that purchase SWP water. Still, according to Utilities Director **William P. Lewis**, that SWP water is "critical" to Yuba City's overall water supply picture.

"The State Water Project provides a good portion of our summer supply," says Lewis. "The city is getting bigger. Before the real estate slowdown of the past couple of years, we were growing at a rate of about 10 percent per year. So, the SWP contract is a major component of our water needs. In past years we were able to sell some of our water through the 'turnback water pool' but as the community continues to grow, we will no longer be able to turn water back."

"I went to a conference recently on sustainable engineering," recounted Lewis, "and came away thinking that water is going to become a very controlling issue in California and the world. Everywhere in the state we're going to have to be more careful about water use. We just have to be more aware of using water wisely."

Although one of the few SWP contractors located north of the Delta, Yuba City is looking at how its water operations might be affected if environmental restrictions now compli-

"I went to a conference recently on sustainable engineering," recounted Lewis, "and came away thinking that water is going to become a very controlling issue in California and the world. Everywhere in the state we're going to have to be more careful about water use."

Bill Lewis,
Utilities Director

***Below**: Harter Storage and Pumping Facility constructed in 2005 can store up to four million gallons of treated water and has a total pumping capacity of 14 million gallons per day. It was constructed for distribution storage and to help maintain distribution system pressure.*

cating Delta pumping move up the Feather River. "As the city grows," said Lewis, "we need to look at the reliability of our water supply and assess all options. Our General Plan talks about utilization of reclaimed water where it's appropriate in the city. Ten years ago, we would have assumed it would come from our potable surface supply."

As we head into the second decade of the 21st century, reliability of its surface water supply is one of Yuba City's biggest concerns, according to Assistant Utilities Director **Dan Sherry**. "Right now, the city is trying to lock up some long term supply contracts as insurance against the uncertainties of possible cutbacks from droughts and other factors," he says. "I think the city will need to be looking at conjunctive use programs while also employing extensive conservation programs."

Sherry looks at recent expansion of the city's water treatment plant as one of the Water Division's greatest achievements. "We added a reliable six million gallons per day (mgd) by using membrane technology," he says. "That gave us a substantial jump from 24 to 30 mgd."

Asked what he would like to change about Yuba City's arrangement with the SWP, if he could turn back the clock, Utilities Director Lewis says he would make sure the city's "area of origin" water rights were firmly in place and would try to negotiate a larger contract.

Looking to the future, he believes public education will become increasingly important. "We need to educate our citizens about the importance of water supply," he says. "For many, it just falls out of a tap…but it came from somewhere, perhaps it was pumped from the ground or from a surface water supply. The key message is that there's an impact to the environment when we use water. It's going to be a multi-generational issue, so we probably need to start aiming our educational efforts at youngsters. One sure way to get a message across to parents and grandparents is through children." ■

City of Yuba City

Top: *Yuba City's water intake structure located on the Feather River was originally constructed in 1969 and now has a total pumping capacity of 40 million gallons per day. It is scheduled for renovation in 2010.*

***Middle**: Aerial view of the Yuba City Water Treatment Plant.*

***Bottom**: Operators working on the Yuba City Water Treatment Plant's membrane system.*

DWR Continues SWP Monitoring after Zebra Mussel Discovery

The Department of Water Resources continues to monitor the State Water Project closely for invasive mussels after the first discovery in California of zebra mussels in mid-January 2008. The SWP has been monitored for quagga mussels since early in 2007 after their initial California discovery along the Colorado River.

At press time, no zebra or quagga mussels have been found in the SWP. Both species are non-native freshwater mollusks that can disrupt food chains and clog small diameter water delivery structures.

A clump of mussels hooked by an angler at San Justo Reservoir was identified as zebra mussels by a State Food and Agriculture laboratory. News reports of the zebra mussel discovery appeared initially on January 15, 2007. The reservoir is part of the San Felipe Division of the U.S. Bureau of Reclamation but is operated by the County of San Benito.

DWR staff quickly conferred with water officials and Department of Fish and Game (DFG) staff in the area to assure that monitoring was instituted. DFG leads a statewide effort in response to the invasive mollusks, with DWR as a partner.

While use of Colorado River water has introduced quagga into several Southern California water systems, the main risk to the SWP, which uses Northern California water sources, from both quagga and zebra mussels is from trailered boats.

Shortly after discovery of the zebra mussels at San Justo, the East Bay Municipal Utility District (EBMUD) restricted access to its reservoirs of boats from areas with quagga and zebra mussels.

In addition to monitoring, DWR has obtained expert consultation on engineering and scientific methods of thwarting mussels.

In late February, DWR helped arrange a briefing on invasive mussels for SWP contractors using the South Bay Aqueduct. One of the briefers was **Renata Claudi**, a Canadian expert on invasive species. Claudi also took part in a DWR-sponsored quagga informational panel at ACWA's Fall Conference in Indian Wells in November, 2007. ACWA represents approximately 450 public water agencies that deliver about 90 percent of the water supply to California cities, farms and businesses. ■

First zebra mussels (Dreissena polymorpha) discovered in California at San Justo Reservoir near Hollister. (Photo by Jeff Janik)

DWR Alumni Club Luncheon

***At Left**: (Left to Right) The DWR Alumni Club Spring Luncheon at the Carmichael Elks Lodge on March 6 included DWR retirees Art Winslow, Fred Strauss, Maxine Burns and Joe Burns. **At Right**: George Barnes, Dwight Russell, Bob Zettlemoyer, and Herb Hereth also enjoying the reunion.*

Educating Students about Engineering

As part of National Engineer's Week in February, three of DWR's Division of Flood Management engineers spoke to more than 100 students at the School of Engineering and Science, a new pilot school in Sacramento.

"The students had great questions about the world of flood forecasting. Many were already thinking of careers in engineering," said **Boone Lek**.

The event – themed "Engineers Make a World of Difference" – included presentations and hands-on workshops on February 21-22 at the former Bear Flag Middle School in the Pocket Area.

DWR's three engineers made separate presentations. **Terry Thompson**'s presentation titled "Achieving through Adversity" encouraged the students to pursue their dream of engineering regardless of their current situation. Senior Water Resources Engineer Boone Lek's topic was on flood forecasting. **Bill Burkhard** spoke about life as an engineer and gave students insights on what their educational pursuit can offer.

"Students were attentive and so inquisitive that the school staff encouraged the presentation to continue twice as long as planned," said Burkhard.

The School of Engineering and Sciences is a new secondary school in the Sacramento City Unified School District. The school opened in September of 2007 with grades 7 and 9. The mission of the school is to graduate students that are qualified for future careers and studies in engineering and other sciences.

The school is seeking more DWR engineers and scientists to talk to students. For more information, contact **Ricardo Pineda** at rpineda@water.ca.gov or **Maria Lorenzo-Lee** at ***mlorenzo@water.ca.gov*** or visit the National Engineering Week Web site at ***http://eweek.org/***

Pyramid Lake Recreation Facilities Reopen

Pyramid Lake recreation facilities reopened April 5 after being closed since February 19, 2008 for silt-removal operations. Following a lake-level drawdown of about 23 feet, crews removed approximately 32,000 cubic yards of silt that had accumulated around the lake's boat dock over the past 34 years. During the Drawdown, repairs were also made to the boating launch ramp's east boarding float system.

State Water Project's 40th Anniversary of Del Valle Lake and Dam

Lake Del Valle created in 1968 provides recreation and fish and wildlife enhancement, flood control for Alameda Creek, and regulatory storage for a portion of the water delivered through the South Bay Aqueduct. DWR Director William Warne speaks during its ground-breaking ceremony in 1966.

Fairness Advocate for Asians, Linda Ng Is Dedicated to State Fair Employment and Housing Commission, DWR Duties

By Pete Weisser

Linda Ng, Chief of DWR's Safe Drinking Water Office, is known within the Department as an efficient, low-key administrator. But she also is a hard-working activist for social justice just appointed to a second term on the State Fair Employment and Housing Commission (FEHC).

Born in Hong Kong and a graduate of the University of San Francisco, Linda honed her business skills in the fields of finance and banking. She whetted her people and social advocacy abilities in community service and advocacy group efforts to ensure fairness for California's Asian Pacific Islander American residents.

"It's good for the soul," beams Linda. "It's rewarding to speak out in the public policy sphere for deserving Asian Californians who might otherwise lack an effective voice."

After serving two years on the FEHC, Linda was reappointed by **Governor Arnold Schwarzenegger** last fall to a new four-year term on the commission.

The FEHC is a quasi-judicial public commission active in enforcing California's civil rights laws regarding discrimination in employment, housing and public accommodations, as well as family and medical leave, pregnancy disability leave and hate violence.

During her first term, Linda participated in several precedential decisions by the Commission, took part in subcommittees on legislation and regulations, directed staff on policy decisions on FEHC's sexual harassment training regulations and was active in public hearings on the sexual harassment training regulations.

She is just ending four consecutive years as President of the Greater Sacramento Chapter of the Organization of Chinese Americans (OCA). OCA is a national organization, headquartered in Washington, D.C., with 81 chapters and affiliates, devoted to ensuring social justice for Asian Pacific Islander Americans. "I have been a member since 1998," says Linda.

Linda believes her background as an advocate for social justice in the Asian Pacific Islander American community has been excellent preparation for service on the FEHC.

"During my tenure as President, each year the OCA Sacramento Chapter has organized a Hate Crimes Awareness Forum to educate the community about this issue, and to facilitate a united and proactive voice when hate crimes occur."

She also established an annual "Reception at the Capitol" to promote civil participation by the Asian Pacific Islander American community in State government.

Linda's advocacy experience includes active membership in California Women for Agriculture, dating back to the 1980s when she lived in Merced, as well as with the Asian Pacific State Employees Association and the Chinese American Council of Sacramento.

Linda's professional career in the banking and financial sector began after she earned a Bachelor of Science degree in Human Resources Management at the University of San Francisco in 1987. She was a small business loan portfolio manager for Valliwide Bank before taking a management position with United Commercial Bank.

She entered State service in 1998 with the California Trade and Commerce Agency. From 1998 to 2002, she was a program manager. In 2002-2003, she became a contract manager with the Small Business Development Center.

During 2003-2004, she was an Associate Management Auditor for the Department of Consumer Affairs.

From 2004-2007, she was a Loan Officer for a Multifamily Housing Program at the State Department of Housing and Community Development.

She joined DWR in March, 2007, becoming chief of the Safe Drinking Water Office, which has a staff of nine. She succeeded **Sylvia Ortega Hunter**, who transferred to the State Department of Health Services (now retitled as the Department of Public Health).

The Safe Drinking Water Office provides financial assistance to local agencies, and to public and private water systems, under California's General Obligation Bond laws and the Proposition 50 Chapter 6 Grant Program to meet State drinking water standards. The office also administers the Safe Drinking Water State Revolving Fund Program and the Proposition 50 Chapters 3 and 4 Grant program for the Department of Public Health.

Her Commission duties involve intense preparation for commission decisions and meetings, which requires careful budgeting of time and workload, as well as travel to San Francisco, where the commission has its headquarters.

She credits her father, an architect as well as a civil engineer in her native Hong Kong, for inspiring her to become educated and a career professional. Like her father, her husband, Michael, is an architect. Her daughter, Faith, is an engineer/consultant. ■

"During my tenure as President, each year the OCA Sacramento Chapter has organized a Hate Crimes Awareness Forum to educate the community about this issue, and to facilitate a united and proactive voice when hate crimes occur."

Linda Ng,
Chief of DWR's
Safe Drinking Water Office

Left to Right: *Fair Employment and Housing Commission's Commissioners include Linda Ng, Carol Freeman, Chair George Woolverton, Vice-Chair Tamiza Hockenhull, and Carlos Bustamante.*

Northern District Geologist Practices Ancient Equestrian Art

Geologist **Kelly Staton**, who has worked out of DWR's Northern District Headquarters in Red Bluff since 1995, has something in common with the Moors who conquered Spain in the eighth century.

She braids horsehair reins and ropes. The craft is called "mecate" and came to the new world when Hernando Cortez introduced horses to the Americas in 1519. Pronounced "muh-caw-tay" by the Spanish, most cowboys say "McCarty."

Originally from the East Bay Area community of Lafayette, Staton grew up around horses at her grandparents' horse ranch near Pleasanton. She also has an aunt and uncle who raise cattle in Northeastern California.

Well-known among horse people for her high quality products, Kelly got her husband and (now college-age) children involved in twisting mecate as she developed her craft. She also wrote a "how-to" article for 'Western Horseman' magazine.

Kelly Staton holds a couple of the ropes that she painstakingly creates out of horsehair.

DWR NEWS/People had this conversation with Staton in January:

When did you get interested in working with rawhide and horsehair? I started braiding when I was in my early 20s. First, I learned to work with rawhide…then eventually moved on to twisting mecates.

Who taught you? **Lige Langston**, the same man who taught me to work with rawhide showed me how to make mecates. He was an oldtime cowboy from Nevada…and I learned the old fashioned way.

Is it a particularly difficult craft to learn? Yes it is. Braiding itself isn't so hard…but doing all the knots, especially in rawhide work, is difficult. With horsehair ropes, it takes awhile to learn how to gauge the string so the thickness is uniform and you don't end up with big clumps in it or get it so thin that it breaks.

What's the hardest part? With the horsehair ropes, you have to give up a whole day to do it. The prep work alone takes about two or three hours before you can even start twisting out the mecate. Then, you're standing for six hours at a time…twisting out each little strand. If you get something wrong, you can get a strand that breaks and then you have to redo it. After twisting out the rope, you still have about two hours of finish work left. Rawhide has to be wet…and it has to be just the right level of dampness or you can't work with it. If it's too dry, it breaks. If it's too wet, it's just disgusting. Of course, I can work with rawhide in the house. The hair ropes take up a lot of space so you have to do it outside…which means you need decent weather.

What about raw materials for your mecate? Obtaining and cleaning the hair is the first step and mecate makers often struggle to find enough good horsehair. A lot of the hair being used today comes from Mongolia by way of China. Tail and mane hair have different properties. Tail hair is considered stronger, but most mecate twisters prefer mane hair for its softness and finer texture.

Where do you get the hair? About 15 years ago, I was fortunate to find a horse breeder willing to cut the manes off her range horses. So, I'm lucky to have a consistent supply of high quality mane hair.

Is twisting mecate a dying art? I don't know if I'd say it's dying…but there aren't a lot of people doing it. You really have to want to do it and enjoy it to stick with it. You don't see a lot of new people taking it up.

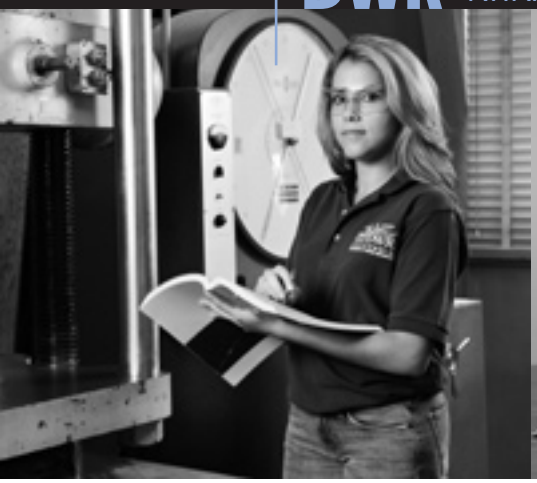
How long does it take to make a set of reins? It is a very time consuming process…especially working with rawhide. It takes at least a week to a week and a half to finish a set of reins. I figured out one time that when I did a pair of rawhide reins, I was making about two-dollars an hour.

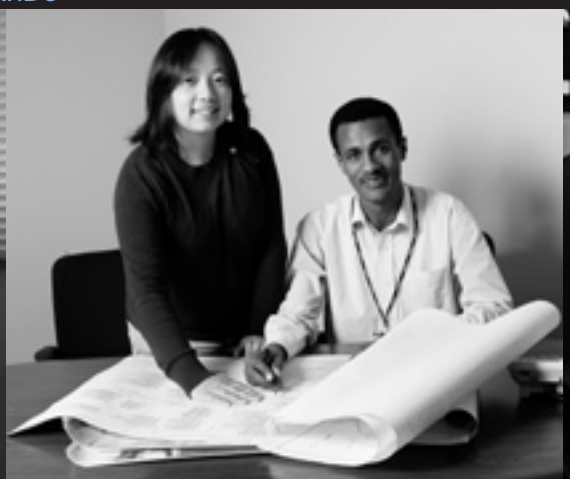
I can do hair ropes in about a day…but there's a lot of prep work, cleaning the hair, and so on.

What does a set of your reins cost? With horsehair, it depends on how thick and how long they are. My prices run from 100 to 150 dollars. A set of rawhide reins can cost as much as 450 dollars.

There's always demand for good products, but definitely not a high demand. Usually, if you have high-quality tack, it lasts a long time, so not a big turnover.

When you consider the time it takes to collect the hair and rawhide, prepare it, and do the braiding, it doesn't sound like a way to get rich quick. Definitely not. That's why I'm not doing it as a fulltime job. But it's a fun hobby…and it's kind of neat to make something that people can use with their horses…something that's been made for a very long time. ■





Professional Engineer Exam Graduates

DWR's four Civil Engineers in the Division of Engineering's Civil Engineering Branch have passed the Professional Engineer (PE) Exam.

"Having our civil engineering staff pass the PE Exam is important to the Department because it certifies that they are no longer an engineer-in-training, but qualifies them to be a professional civil engineer," said **Ron Lee**, Chief of the Division of Engineering's Civil Engineering Branch. "Once they receive this license, they can practice as a professional civil engineer and are promoted to an Engineer, W.R., Range D."

To qualify for the Professional Engineer Civil Exam, engineers must have a civil engineering degree and work two years under the direction of a registered civil engineer. The exam for the engineering disciplines, such as Civil, Mechanical, and Electrical engineering, is given by the California Board for Professional Engineers and Land Surveyors.

The Civil Engineer exam consists of four parts in California. Part one is a take-home exam on ethics and laws of the profession. In part two, there is an eight-hour multiple choice exam on principles and practice. Some of the areas covered include water resource, transportation, structural, geotechnical, and environmental issues. There are also seismic principles and engineering surveying exams.

For the four Civil Engineering Branch graduates, passing the PE Exam in the fall of 2007 became an important part of their careers.

Dagnachew Fanta, a Civil Engineer with the Pipelines Section, received his Bachelor of Science degree in Civil Engineering from the Arba Minch Water Technology Institute of Arba Minch University in Ethiopia and his Master of Science in Water Resources Engineering from the University of Applied Sciences and Research, Suderburg, Germany.

While preparing for the PE exam, he worked on the design of South Bay Pumping Plant Completion, the Surge Tank, Canal Modifications, and the Transmission line for the South Bay Aqueduct Enlargement Program.

Anna Ortiz, a Civil Engineer with the General Engineering Section, received her Bachelor of Science degree in Civil Engineering from the University of California, Davis. As part of her DWR assignment, Ortiz worked on the Lake Davis Fish Containment project design team, where she was involved in the development of a strainer system that was designed to prevent all life stages of Northern Pike from escaping into Big Grizzly Creek, downstream of the Grizzly Valley Dam. Anna also worked on the Canal Lining Repair Project, where concrete lining repairs are being made on the California Aqueduct – San Luis Field Division from Milepost 56 to Milepost 165 near Los Banos.

"To prepare for the PE exam, I studied one subject at a time for four hours every evening during the week and five to eight hours on weekends for a few months," said Ortiz.

Thanh Hai Doan-Nguyen, a Civil Engineer with the Pipelines Section, received her Bachelor of Science degree in Civil Engineering at California State University, Sacramento. She worked on the Dyer Reservoir and Canal Modifications projects while taking night and weekend classes to prepare for the PE Exam.

Mally Vue, a Civil Engineer with the General Engineering Section, received her Bachelor of Science degree in Civil Engineering at California State University, Sacramento. While studying for the PE Exam, she worked on the Inundation Studies for Pyramid, Bethany, and Castaic Dams.

"In preparation for the PE exam, I scheduled three hours per day for studying the Professional Engineer Study Guide five days a week," said Vue. "Study time was extended to over the weekends. Now that it is over, I not only have to rediscover social life, but I have to learn how."

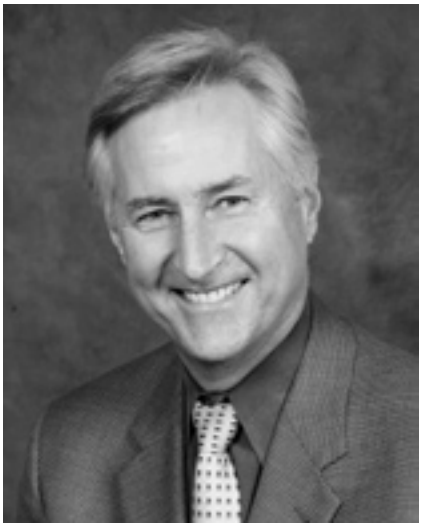
To learn more about the PE Exam, visit the California Board for Professional Engineers and Land Surveyors Web site at ***http://www.dca.ca.gov/pels*** ■

***Left to Right**: Professional Engineer Exam Graduates Anna Ortiz, Mally Vue, Dagnachew Fanta, and Thanh Hai Doan-Nguyen.*

DWR'S 2007 ANNUAL AWARDS

On February 27 in the Resources Building in Sacramento, ***Director Lester Snow*** *presented awards to recognize Department employees who have made exceptional contributions to the efficiency and effectiveness of the Department and State Government. DWR congratulates the following award recipients.*

Director's Award



Mark Cowin
Deputy Director
Executive

Management Excellence Awards

Tracie Billington
Supervising Engineer
Planning and Local Assistance

Dale Hoffman-Floerke
Chief, Colorado River
and Salton Sea Office
Executive

Outstanding Professional and Superior Accomplishment Awards

Ted Craddock
Supervising Engineer
Engineering

Charles Peery
Water Resources Technician II
Planning and Local Assistance

Edna Smith
Associate Governmental
Program Analyst
Operations and Maintenance

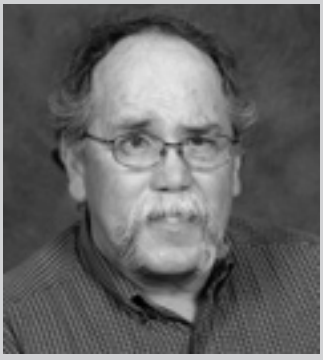
Don Walker
Senior Engineer
Engineering

Outstanding Technical and Sustained Superior Accomplishment Awards

Susie Beesley
Associate Governmental
Program Analyst
Management Services

Jennifer Bingaman
Associate Governmental
Program Analyst
Flood Management

Felipe Renteria-Lizardi
Staff Information
Systems Analyst
Technology Services



Dana White
Water Resources Technician II
Planning and Local Assistance

Outstanding Office Services and Sustained Superior Accomplishment Awards

Lisa Batiste
Staff Services Analyst
Office of Water Use Efficiency
and Transfers

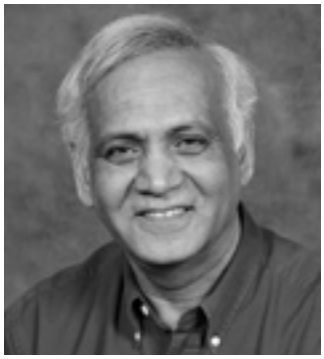
Robin LeMay
Office Technician
Operations and Maintenance

Linda Woolridge
Office Assistant
Planning and Local Assistance

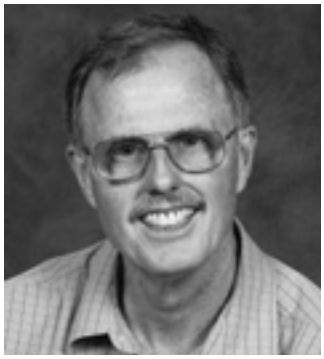
Outstanding Professional and Sustained Superior Accomplishment Awards

Cindy Beach
Construction Management Supervisor
Engineering

Mark Chadwick
Staff Information Systems Analyst
Planning and Local Assistance



Gurdev "Dave" Chima
Engineer
Flood Management

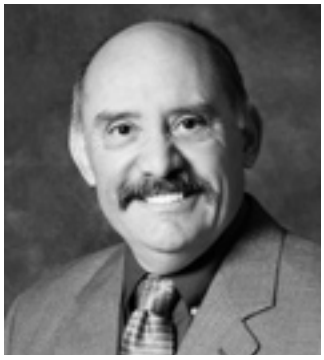


Stephen W. Cowdin
Research Program Specialist II (Economics)
Planning and Local Assistance

Jennifer Dong
Staff Services Manager I
Management Services

Jamie Dubay
Associate Land Use Scientist
Planning and Local Assistance

Teresa Engstrom
Supervising Engineer
Engineering



Victor Garcia
Staff Information Systems Analyst
Technology Services

Vinh Giang
Engineer
Operations and Maintenance

Lenny Grimaldo
Environmental Scientist
Environmental Services

Eric Hong
Supervising Engineer
Planning and Local Assistance

Josephine Ellen Kachadorian
Photogrammetrist II
Engineering

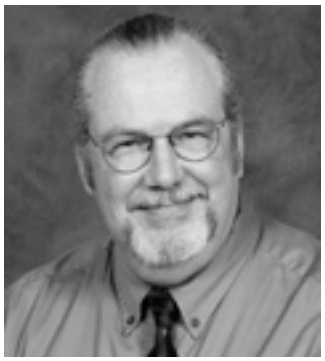
Outstanding Professional and Sustained Superior Accomplishment Awards

Russell Kiriu
Staff Services Manager II
Management Services

Brent Lamkin
Senior Engineering Geologist
Engineering

John Leahigh
Supervising Engineer
Operations and Maintenance

Maria Lorenzo-Lee
Senior Engineer
Flood Management



Tim Milliron
Engineer
Engineering

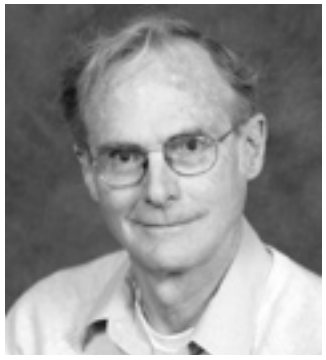
Jon Mulder
Engineering Geologist
Planning and Local Assistance

Ganesh Pandey
Senior Engineer
Engineering

John Rizzardo
Supervising Engineer
Operations and Maintenance

Bud Scribner
Staff Information
Systems Analyst
Technology Services

Mary Scruggs
Senior Engineering Geologist
(Supervisor)
Planning and Local Assistance



Brian Smith
Supervising Engineer
Planning and Local Assistance

Debbie Spangler
Engineering Geologist
Planning and Local Assistance

Outstanding Professional and Sustained Superior Accomplishment Awards

Jim Spence
Principal Hydroelectric Power Utility Engineer
California Energy Resources Scheduling

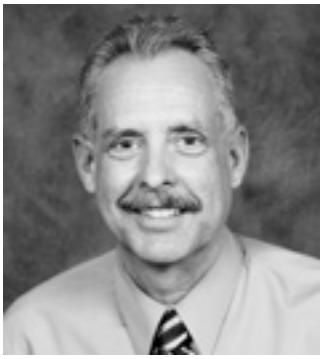
Curt Spencer
Principal Engineer
State Water Project Analysis Office

Kelly Staton
Engineering Geologist
Planning and Local Assistance

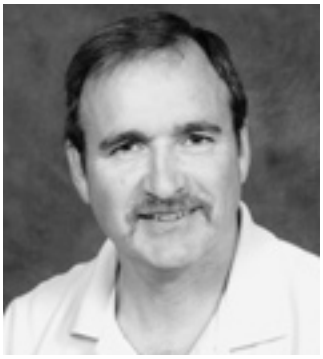
Sam Sublett
Construction Management Supervisor
Engineering

Kevin Sun
Engineer
Operations and Maintenance

Ralph Svetich
Supervising Engineer
Flood Management



Chuck Toney
Supervising Hydroelectric Power Utility Engineer
California Energy Resources Scheduling



Olaf VanArdenne
Staff Information Systems Analyst
Technology Services

Bih Yuan
Associate Control Engineer
Operations and Maintenance

Division of Engineering 2007 Annual Safety Awards

The Division of Engineering's Project Safety Office under the leadership of **Albert Romero** recognized P**roject Geology Section** for outstanding unit safety performance and **Reynaldo Ballesteros** for outstanding individual safety performance for fiscal year 2006/2007.

"These awards were the first ever for the Division," said Division of Engineering's Chief **Richard Sanchez**. "It is important to showcase examples of good safety performance."

Project Geology, under the leadership of **Frank Glick**, exhibited a high level of performance in safety by providing the impetus to resurrect a program to procure and maintain gas detectors. The section has also been diligent providing safety training for the field workers and supervisors as well as holding regular safety meetings that incorporate safety training in the hazards they encounter.

"My staff and I work very hard to stay safe in our field assignments and in the office," said Glick.

Reynaldo Ballesteros, Chief Inspector on the South Bay Enlargement projects, was lauded for his diligence in participating in safety meetings and for performing regular site inspections for safety deficiencies. He also worked closely with Delta Field Division in establishing the gas monitoring program for the Division of Engineering's Construction Office. Ballesteros has also participated in other safety assignments and has shown a keen understanding of safety issues and provided significant information that will help in developing a World-Class safety program for the Division. ■

***Above**: Rich Sanchez (DOE Chief), Rey Ballesteros (Chief Construction Inspector), and Albert Romero (Project Safety Officer).*

***Photo on top**: (Left to Right) Project Geology Section award recipients include (Front) Brent Lamkin, Ted Bruce, Steve Belluomini, and Mark Pagenkopp. (Back) Al Romero, Don Hoirup, Doug Ellis, Frank Glick, Albert Laguardia, and DOE Chief Rich Sanchez. (Not in photo) Rob Barry, Steve Killingsworth, Farhad Nasirian, Mike Purcell, John Curless, and Peter Czerkies.*

Health and Safety Office Unit Citation

Congratulations to the Health and Safety Office staff, which include Chief **Tom Beiler**, Associate Personnel Analyst **Karina Kugel**, and Senior Personnel Specialist **Judy Alexander**.

In recognition of and appreciation for your exemplary efforts in administering the Department's workers' compensation program whose costs for fiscal year 2006-07, show a significant 11 percent decline over the prior year. The Department has one of the lowest workers' compensation percent of payroll costs in the entire Resources Agency, amounting to only 1.19 percent, compared to the statewide average of 3.36 percent. The cost reduction is attributed to the Health and Safety Office's steadfast attention to workplace safety with the desire to bring injured employees back to gainful employment as quickly as possible. You are to be commended in your efforts to reduce State expenditures and provide a safe work environment for all of our employees. ■

***Left to Right**: Personnel Office Chief Fariba Shahmirzadi, Health and Safety Office Chief Tom Beiler, Judy Alexander, Karina Kugel, and Division of Management Services Chief Jim Libonati.*

Twenty-Five Years of Service

Patricia Huckabay
Northern District
Associate Engineer
September 2007

Laura Nelson
State Water Project
Analysis Office
Administrative Officer II
April 2008

Larry L. Payne
Oroville Field Division (O&M*)
Senior Hydroelectric
Plant Operator
April 2008

Susan Sims
Public Affairs Office
Assistant Director for
Public Affairs
March 2008

Robert Syphax
Technology Services
Systems Software
Specialist III (Supv.)
March 2008

Fred Williams
Operations and Maintenance
Senior Water & Power
Dispatcher
April 2008

*** Operations & Maintenance**

A Tour of Russia's Upper Volga River

By Don Babbitt, DWR retired Chief of the Design Engineering Branch of the Division of Safety of Dams

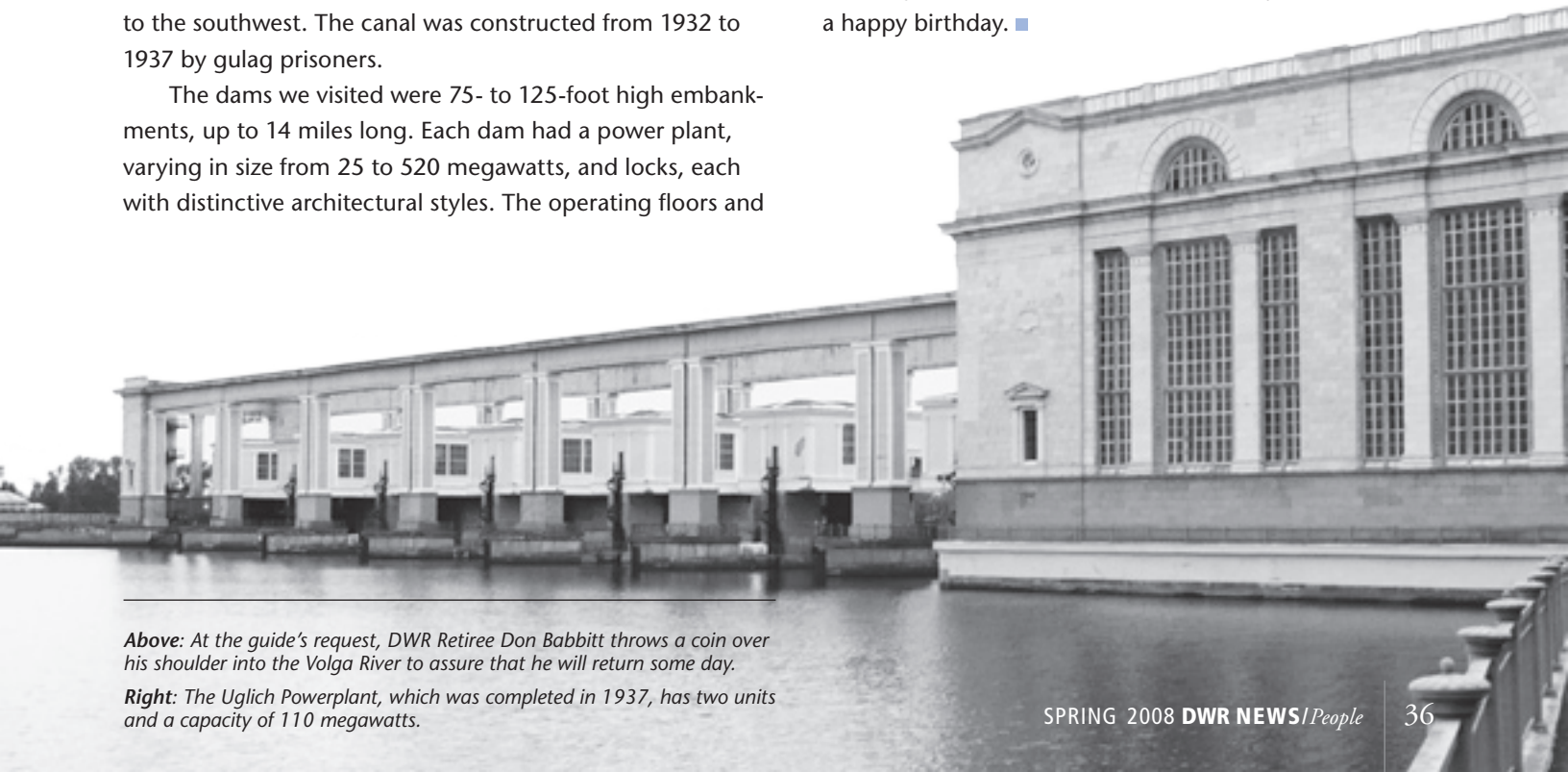
After attending the annual meeting of the International Commission on Large Dams in St. Petersburg, Russia last summer, I participated in a study tour of dams, hydroelectric generating stations, navigation locks, and cultural sites on the Upper Volga River. The 36 other participants were from Australia, Belgium, Brazil, China, Colombia, France, India, Russia, South Africa, and Switzerland. The first leg of the tour was an eight-hour train ride from St. Petersburg to Moscow starting at 11:35 p.m., just about sunset in the far north. In Moscow, we were bused to the Moscow Canal and the Bashkortostan, our small tour ship.

The 78-mile long Moscow Canal provides the city's link to the Volga River and Russia's system of inland waterways. It also provides 55 percent of the city's water supply and a popular recreation site. The Volga begins in the Valdai Hills northwest of Moscow at only 750 feet above sea level. It trends northeast, southeast, then south to the Caspian Sea, a total of 2,120 miles. Its 500,000 square mile watershed encompasses much of western Russia. The average annual flow is 240,000 cubic feet per second at Volgograd, about 350 miles from the Caspian Sea. Other navigation canals connect the Volga, hence Moscow, to the Baltic and White seas to the northwest and the Sea of Azov and the Black Sea to the southwest. The canal was constructed from 1932 to 1937 by gulag prisoners.

The dams we visited were 75- to 125-foot high embankments, up to 14 miles long. Each dam had a power plant, varying in size from 25 to 520 megawatts, and locks, each with distinctive architectural styles. The operating floors and walls were finished with patterned tile, yet we were told that we were the first visitors to a plant that was completed in 1937. All the operators were obviously very pleased to show off their facilities to colleagues from other countries, just as I was when I helped show Orovillle Dam to visiting engineers.

We stopped at six small cities, all of them one to two hundred years older than Moscow. We toured restored churches and other buildings, small museums, and art galleries, learning a lot of Russian history. Highlights included the Vodka Museum in Uglich and St. Ipaty Monastery in Kostroma. The museum has a tasting room. The walled monastery had served its traditional purpose and as an outpost on the Russian frontier. Young Mikhail Romanovo was in exile there when the Russian National Assembly elected him Tsar in 1613, the first of the Romonovo dynasty. The monastery's church, including an ornate icon wall and frescos, has been restored. Four young monks sang traditional songs and hymns for us; the acoustics of the room made them sound like a full choir. The locals and Russian tourists seemed very glad that foreigners were interested in this historic part of their country.

The last day of the tour happened to be the Fourth of July. The first announcement over the ship's PA system that morning was that it was the USA's birthday and to wish us a happy birthday. ■



***Above**: At the guide's request, DWR Retiree Don Babbitt throws a coin over his shoulder into the Volga River to assure that he will return some day.*

***Right**: The Uglich Powerplant, which was completed in 1937, has two units and a capacity of 110 megawatts.*

Birth Announcements

Congratulations to State Water Project Analysis Office parents:

Grace Cheng, Engineer with the Contract Billing Support Section, has a son named Andrew Ruiqi, who was born on January 11 weighing 8 pounds and 4 ounces.

Lauren Muscatine, Supervisor of Technical Publications for the Bulletin 132 Section, has a daughter named Lavender Lilikoi, who was born on February 4 weighing 7 pounds, 3 ounces, and measuring 20.5 inches long.

Retirement

Michael Bazylak
Southern Field Division
Senior HEP* Operator

Wayne Cedidla
Engineering
Senior Mechanical Engineer, HS

John Coleman
Operations & Maintenance
Water & Power Dispatcher

Kathryn Coyle
Fiscal Services
Accounting Officer

Terry Dennis
Operations & Maintenance
Chief Water and Power Dispatcher

Terry Douke
Engineering
Construction Management Supv.

Sandra Firch
Management Services
Associate Management Analyst

Helen Frye
Engineering
Secretary

David Haynes
Management Services
Associate Business Management Analyst

Nancy Keiser
Southern Field Division
Stock Clerk

Sandra Marino
Management Services
Associate Governmental Program Analyst

James Martin, Jr.
Environmental Services
Recreation and Wildlife Resources Advisor

James Obrien
Executive
Staff Counsel III

James Olson
California Energy Resources Scheduling
C.E.A.

Jayant Patel
Central District
Water Resources Technician II

Alta Walton
Management Services
Bookbinder II

New Hires

Michele Acosta
Executive
Senior Legal Typist

Katayoun Aflatouni
Operations & Maintenance
Electrical Engineer

Joanne Arcilla
Engineering
Office Technician (Typing)

Javed Ashraf
Operations & Maintenance
Electrical Engineer

Tasnim Aslam
State Water Project Analysis Office
Electrical Engineer

Musa Aziz
Engineering
Mechanical Engineer

Melody Baldwin
Flood Management
Research Analyst II (GIS)

Rachel Ballanti
Engineering
Office Assistant (Typing)

Stacey Berringer
Engineering
Staff Services Analyst

Helen Birss
Flood Management
Staff Environmental Scientist

Daniel Boulant
Oroville Field Division
HEP* Operator Apprentice

Robin Brewer
Executive
Staff Counsel III

Sherie Brubaker
Environmental Services
Systems Software Specialist III (Supv.)

Eric Burk
Oroville Field Division
HEP* Operator Apprentice

Cecelia Campos
State Water Project Analysis Office
Office Technician (Typing)

David Carlson
Flood Management
Environmental Program Manager I (Supv.)

Robin Carter
Oroville Field Division
Environmental Scientist

Brandon Chee
Engineering
Office Assistant (Typing)

Victoria Chesnut
Southern Field Division
Office Technician (Typing)

Binta Coleman
Flood Management
Engineer

Bonnie Crozier
Engineering
Construction Inspector Technician

John Curless
Engineering
Engineering Geologist

* **Hydroelectric Plant**

INFORMATION PROVIDED BY DWR'S PERSONNEL OFFICE

New Hires

Carolyn Dabney
Engineering
Associate Land Agent

Ernest Davis
Delta Field Division
HEP* Mechanic I

Mark Decell
Management Services
Staff Services Analyst

Jaspreet Dhanota
State Water Project
Analysis Office
Electrical Engineer

Balwinder Dhillon
Operations & Maintenance
Electrical Engineer

Glenn Diggan
Delta Field Division
Utility Craftsworker

Brent Dills
Management Services
Staff Services Manager I

Robert Dolliver-Lum
Technology Services
Staff Information Systems
Analyst

Laura Featherstone
Oroville Field Division
Associate Governmental
Program Analyst

Thomas Filler
Planning & Local Assistance
Staff Environmental Scientist

Larry Fishbain
Central District
Engineer

Donald Fleharty
Technology Services
Assistant Information
Systems Analyst

Cheryl Fong-Ohara
Management Services
Personnel Specialist

Nathanael Frank
Management Services
Staff Services Analyst

Robert Frisk
Management Services
Office Assistant (Typing)

Benjamin Gale
Engineering
Office Assistant (Typing)

Daniel Garcia
Engineering
Junior Engineering
Technician

Julio Gomez
Engineering
Junior Engineering Technician

Lori Grimes
Southern Field Division
HEP* Operator Apprentice

Jason Harbaugh
Central District
Research Analyst II (GIS)

Jeffrey Harrison
Southern Field Division
Utility Craftsworker
Apprentice

Gary Hester
Executive
Chief Engineer, Central
Valley Flood Protection Board

Martin Janolo
Flood Management
Engineer

Mary Jensen
Operations & Maintenance
Engineer

Bryan Johnson
San Luis Field Division
HEP* Operator Apprentice

Kenneth Johnson
San Joaquin District
Engineer

Frank Johnson IV
San Luis Field Division
Utility Craftsworker

Kuo-Cheng (Kevin) Kao
Bay-Delta Office
Engineer

Kenneth Karcher
Flood Management
Engineer

Deborah Kearly
Fiscal Services
Accounting Administrator II

Spencer Kenner
Executive
Staff Counsel III

Kristopher Klima
Engineering
Transportation Surveyor
(Caltrans)

Joseph Kranhold
Flood Management
Environmental Scientist

James Kreimeyer
Southern Field Division
HEP* Electrician I

Tony Lam
State Water Project
Analysis Office
Senior HEP** Utility
Engineer (Supv.)

Stacy Larkin
Executive
Executive Assistant

Jennifer Leavitt
Flood Management
Office Technician (Typing)

John Lee
Delta Field Division
HEP* Operator Apprentice

Yolanda Lemence-Lantin
Fiscal Services
Associate Accounting Analyst

Justin Levitt
Management Services
Office Technician (Typing)

Pamela Lindholm
Environmental Services
Environmental Scientist

Siqing Liu
Bay-Delta Office
Engineer

Kevin Loutensock
Central District
Junior Engineering
Technician

Anne Luc
Management Services
Staff Services Analyst

Sean Maguire
Engineering
Engineer

Krista Mason
Management Services
Office Technician (Typing)

Lane Massey
Management Services
Office Assistant (Typing)

Louis Mastella, Jr.
Management Services
Senior Information Systems
Analyst (Supv.)

Dane Mathis
San Joaquin District
Engineering Geologist

Deborah Mcewan
State Water Project
Analysis Office
Research Writer

Joshua Meidav
Flood Management
Environmental Scientist

Samuel Miller
Flood Management
Engineer

Russell Mills
California Energy Resources
Scheduling
Senior HEP** Utility Engineer

Omar Moheyeldin
Technology Services
Data Processing Manager II

* **Hydroelectric Plant**
** **Hydroelectric Power**

INFORMATION PROVIDED BY DWR'S PERSONNEL OFFICE

New Hires

Jill Morgan
San Luis Field Division
Guide II

Kyle Morris
Delta Field Division
HEP* Mechanic Apprentice

Jacob Morse
San Luis Field Division
HEP* Operator Apprentice

Anthony Neves
Fiscal Services
Staff Services Analyst

Heather Nguyen
Fiscal Services
Associate Accounting Analyst

Holly Nichols
Engineering
Engineering Geologist

Sarah Okumu
Flood Management
Engineer

James Openshaw
Executive
Staff Counsel III

Michael Oprean
Fiscal Services
Staff Services Analyst

Albert Pain
Southern Field Division
HEP* Electrician I

Jose Palomo
Operations & Maintenance
Associate HEP** Utility
Engineer

Antonio Perez
Delta Field Division
HEP* Mechanic Apprentice

Garnet Perlas
San Luis Field Division
Engineer

John Personeni
Engineering
Construction Inspector
Technician

Alexis Phillips-Dowell
San Joaquin District
Engineer

Michael Pinkston
Engineering
Transportation Surveyor
(Caltrans)

Alina Post
Management Services
Staff Services Analyst

Stanley Randall
Management Services
Inspector of Automotive
Equipment

David Rayburn
Delta Field Division
Heavy Equipment Mechanic

Rupinder Rehal
Operations & Maintenance
Electrical Engineer

Brandon Rettmann
Delta Field Division
Heavy Equipment Mechanic

Russell Rivas
San Joaquin Field Division
HEP* Electrician I

Angel Romero Jr.
Technology Services
Data Processing Manager III

Mitchel Russo
Operations & Maintenance
Engineer

Subir Saha
Bay-Delta Office
Engineer

Brian Schreier
Operations & Maintenance
Environmental Scientist

Daniel Schwartz
Engineering
Transportation Surveyor
(Caltrans)

Christopher Scobba
Flood Management
Engineer

Majid Shahmirzadi
Fiscal Services
Associate Accounting Analyst

Aimee Shepard
Executive
Senior Legal Typist

Diane Shimizu
Operations & Maintenance
Environmental Scientist

Hyun-Min Shin
Flood Management
Engineer

Geoffrey Shumway
Executive
Staff Services Analyst

Amy Simpson
Flood Management
Engineer

Shivcharan Singh
Flood Management
Engineer

Alicia Slay
Executive
Office Technician (Typing)

William Smith
San Joaquin Field Division
HEP* Operator Apprentice

Rick Smith
Management Services
Business Service Officer II

Makoto Sullivan
San Joaquin Field Division
HEP* Electrician I

Hojyh Sun
Technology Services
Senior Programmer Analyst

Adele Taylor
Operations & Maintenance
Systems Software Specialist II

Keith Thaxton
Technology Services
Associate Information
Systems Analyst

Anh Tran
Fiscal Services
Accounting Officer

Xuanan Tran
Fiscal Services
Accountant Trainee

Michael Tufts
Fiscal Services
Accounting Administrator I
(Supv.)

Arlene Ulibarri
Management Services
Personnel Specialist

Aleksander Vdovichenko
Planning & Local Assistance
Engineer

M. Elizabeth Ware
Management Services
Staff Services Analyst

Matthew Warnick
Management Services
Office Assistant (Typing)

Brian Whitaker
Engineering
Right of Way Agent

John Wilusz
Flood Management
Engineer

Jeff Winchester
Southern Field Division
Junior Engineering
Technician

Shuklan Wong
Fiscal Services
Accounting Officer

Sheri Wong
Technology Services
Associate Information
Systems Analyst

Linyu Wu
Technology Services
Systems Software Specialist II

Wenli Yin
Operations & Maintenance
Engineer

Kip Young
Flood Management
Environmental Scientist

* **Hydroelectric Plant**
** **Hydroelectric Power**

INFORMATION PROVIDED BY DWR'S PERSONNEL OFFICE

Promotions

Iris Abernathy
Fiscal Services
Accounting Officer

Ira Alexander
Northern District
Water Resources Technician II

Norma Alvarado
Management Services
Staff Services Manager I

Teodoro Alvarez
State Water Project
Analysis Office
Supervising Engineer

John Andrew
Executive
Principal Engineer

Claudio Avila
Flood Management
Senior Engineering Geologist

Emilio Aviles III
San Joaquin Field Division
Utility Craftsworker

Melanie Baillie
Fiscal Services
Staff Services Manager I

Ariya Balakrishnan
Safety of Dams
Senior Engineer

Dennis Balinsat
Technology Services
Supervising Land Agent
(Supv.)

Julius Bautista
Flood Management
Engineer

Helen Bernstein
Fiscal Services
Senior Accounting Officer

Jennifer Bingaman
Flood Management
Associate Governmental
Program Analyst

Stephen Bradley
Flood Management
Principal Engineer

Michael Brummer
San Joaquin Field Division
HEP* Mechanical Supervisor

Loris Buford
Flood Management
Associate Governmental
Program Analyst

Alex Bumgarner
Flood Management
Utility Craftsworker
Apprentice

Domingo Cardoza
Operations & Maintenance
Engineer

Larry Carmo
San Luis Field Division
HEP* Maintenance Supt.

Jay Chamberlin
Flood Management
Environmental Program
Manager I (Supv.)

Concepcion Cobos
San Joaquin Field Division
Water Resources Technician I

Ted Craddock
Engineering
Supervising Engineer

Steve Croft
Technology Services
Systems Software Specialist III

Matthew De Groot
Engineering
Right of Way Agent

Jennifer Dong
Management Services
Staff Services Manager II
(Managerial)

Michael Dooley
Southern Field Division
Business Service Officer I

Wesley Dote
Engineering
Senior Land Agent

Joel Dudas
Flood Management
Senior Engineer

Ismael Echeverria
Engineering
Engineer

Jon Edwards
California Energy Resources
Scheduling
Senior HEP** Utility Engineer

Alyssa Eisner
San Joaquin District
Environmental Scientist

Gordon Enas
Engineering
Supervising Engineer

Nancy Finch
Executive
Staff Counsel III

Ty Fisher
Technology Services
Staff Information Systems
Analyst

Janiene Friend
Planning & Local Assistance
Staff Services Analyst

Victor Garza
San Luis Field Division
Utility Craftsworker

Neil Gould
Executive
Assistant Chief Counsel

Elmer Gray
San Joaquin Field Division
HEP* Maintenance Supt.

Charyce Hatler
San Joaquin District
Staff Environmental Scientist

Todd Hegwood
Southern Field Division
Utility Craftsworker

Lynne Hermosillo
Operations & Maintenance
Associate Governmental
Program Analyst

Adel Hicks
Fiscal Services
Senior Accounting Officer
(Supv.)

Brandon Hill
Delta Field Division
Utility Craftsworker

James Hockenberry
Engineering
Staff Environmental Scientist

Cindy Holbus
Flood Management
Associate Governmental
Program Analyst

Judy Huang
Fiscal Services
Associate Accounting Analyst

Karen Hull
Flood Management
Utility Craftsworker Supt.

Cory Hutton
Flood Management
Utility Craftsworker
Apprentice

Oscar Jimenez
Southern Field Division
HEP* Mechanic II

Dennis Johnson
Environmental Services
Associate Governmental
Program Analyst

Christopher Jones
Flood Management
Senior Engineer

Jenkins Kumeh
Fiscal Services
Accounting Administrator I
(Supv.)

Jason La Deaux
Central District
Water Resources Technician I

Dyanna Laing
Engineering
Construction Supervisor II

Christopher Lam
Flood Management
Engineer

* **Hydroelectric Plant**
** **Hydroelectric Power**

INFORMATION PROVIDED BY DWR'S PERSONNEL OFFICE

Promotions

Sandra Layne
Office of Water Use Efficiency
Executive Secretary I

Tammy Lytle
Fiscal Services
Accounting Administrator I

Terry Macaulay
Executive
Supervising Sanitary Engineer

Michael Malott
San Joaquin Field Division
HEP* Mechanic II

David Martasian
Flood Management
Senior Environmental Scientist

Ryan Martin
Oroville Field Division
Staff Environmental Scientist

Douglas Mcelvain
Operations & Maintenance
Program Water & Power Dispatcher

Wolfgang Meyersohn
Flood Management
Senior Engineer

Robert Moore
Engineering
Senior Electrical Engineer, HS

Cale Nasca
Flood Management
Engineer

Domenick Newton
Southern Field Division
Utility Craftsworker

Frank Nickel
Executive
Legal Analyst

William Nolan
California Energy Resources Scheduling
Senior HEP** Utility Engineer

William O'Leary
Flood Management
Senior Engineer

Dave Otto
Engineering
Senior Architect

Mark Pagenkopp
Engineering
Senior Engineering Geologist

David Panec
Operations & Maintenance
Supervising Engineer

Patricia Quickert
Flood Management
Staff Environmental Scientist

Charles Ragsdale
Operations & Maintenance
Senior Water & Power Dispatcher

Michael Ramsey
Operations & Maintenance
Senior HEP** Utility Engineer (Supv.)

Jane Randall
Southern Field Division
Water Resources Technician II

Scott Rebelo
Engineering
Water Resources Technician I

Anitha Rednam
California Energy Resources Scheduling
Associate HEP** Utility Engineer

Lisa Riella
Management Services
Personnel Specialist

John Robinson
Southern Field Division
Water Resources Technician I

Alisa Rockwell
San Joaquin Field Division
Utility Craftsworker

Angel Rodriguez
Fiscal Services
Staff Services Analyst

Gina Rouse
Oroville Field Division
Chief HEP* Operator

David Sale
Engineering
Construction Supervisor II

Janet-Marie Salinas
Engineering
Staff Services Manager I

Genevieve Schrader
Bay-Delta Office
Senior Engineer

Mohammed Shahid
Engineering
Senior Engineer

Erick Soderlund
Executive
Graduate Legal Assistant

Glenn Solberg
Operations & Maintenance
Chief Water & Power Dispatcher

Michael Souza
San Luis Field Division
Water Resources Technician II

Silvia Sparks
Southern Field Division
Business Service Officer I

James Spence
California Energy Resources Scheduling
Principal HEP** Utility Engineer

Linda Sprecher
Planning & Local Assistance
Associate Governmental Program Analyst

Trisha Swanson
Executive
Executive Assistant

Robert Syphax
Technology Services
Systems Software Specialist III (Supv.)

Amanda Tai
Technology Services
Staff Programmer Analyst

Dottie Tarleton-Rush
Planning & Local Assistance
Associate Governmental Program Analyst

Adrienne Thacker
Environmental Services
Associate Governmental Program Analyst

Nathan Van Emmerik
Flood Management
Engineer

Michael Van Raalte
Southern District
Water Resources Technician I

Katherine Weaver
Environmental Services
Environmental Scientist

Jean Witzman
Environmental Services
Staff Environmental Scientist

Sisay Woldemichael
Fiscal Services
Associate Accounting Analyst

Sau Wong
Fiscal Services
Accounting Officer

Alicia Wong
Flood Management
Staff Services Manager I

Kuo Yang
Engineering
Senior Mechanical Engineer

Carlon Yuan
Engineering
Water Resources Technician I

Jamal Zumot
Engineering
Senior Engineer

* **Hydroelectric Plant**
** **Hydroelectric Power**

INFORMATION PROVIDED BY DWR'S PERSONNEL OFFICE

Obituaries

In Memory of DWR Engineering Geologist Dave Forwalter

Dave Forwalter passed away at the age of 52 on April 1, 2008 after a hard fought battle with an extremely virulent strain of pneumonia. Dave was currently working as an Engineering Geologist in DWR's Northern District Geologic Investigations Section.

Dave, who had a Bachelor of Science degree in Geology and graduate education in Hydrology/Hydrogeology from California State University, Chico, joined Northern District as a Graduate Student Assistant in 1986. He began working as Engineering Geologist in 1989. During his DWR career, Dave spent most of his time working on dam site investigations and fluvial geomorphology studies along the Sacramento and Feather Rivers. He also conducted seismic and groundwater monitoring investigations. Dave was an avid reader and enjoyed fishing, gardening, photography, camping, and most outdoor activities.

Dave also worked for the State of California – Governor's Office of Emergency Services (OES) from 1992 to 1997. During his six years with the OES, he worked on 15 flood, fire, and earthquake disasters in the damage assessment, GIS mapping, and risk management programs.

He was a Professional Geologist for the State of California and received several awards from OES and DWR for his accomplishments, such as his contributions to the completion of the 760 foot deep Walker Mine monitoring well for the Regional Water Quality Control Board. He has authored and co-authored numerous reports detailing a wide variety of investigations. Before joining DWR, Dave worked three years performing exploration drilling and geologic mapping for geothermal and gold exploration programs.

Dave is survived by his father, Jim; twin brother, Mark; sister, Sue; and his girlfriend Kaye.

Dave's sudden death came as a shock to all who knew him. He will be sorely missed by family, friends, and co-workers. ■

Tony Alfidi

Tony Alfidi, retired Associate Mechanical Engineer, passed away at the age of 73 on January 30, 2008.

Tony, who was raised in Manown, Pennsylvania, graduated from Monongahela High School in 1953 and the School of Engineering at the University of Pittsburgh in Pennsylvania in 1959.

He moved from Pennsylvania to accept a position with the State of California's Department of Water Resources to assist in the start-up and operational testing of all units in the Oroville and Thermalito Powerplants. From 1969 to 1972, he was Assistant Mechanical Engineer at DWR's Palmdale Office until joining the Division of Engineering's Mechanical Engineering Branch. After 34 years with DWR, Tony retired in 1997.

During his DWR career, he worked on the design and construction of various mechanical systems at Pearblossom and Oso Pumping Plants, Devil Canyon Powerplant, Cedar Springs Dam Outlet Works, San Bernardino Intake, Bottlerock and South Geysers Geothermal Powerplants. In addition, Tony provided valuable design support during the Impeller Replacement Program for six major pumping plants and for the preparation of the Design Engineer's Criteria for Banks Pumping Plant. He also worked on the Coastal Branch.

Prior to retiring, Tony became very involved in the mentoring of new engineers. He will be remembered as a very enjoyable colleague with a continuously positive outlook.

Tony is survived by his wife, Barbara, three sons, and one grandson. ■

Donald Alan Schuder

Donald Schuder, Water Resources Technician, passed away at the age of 78 in Woodland on January 12, 2008.

Don, who was born in Colusa County and was a Yolo County resident, graduated from Woodland High School and Sacramento State College, where he received a Bachelor's degree in Chemistry, a Bachelor's degree in Psychology, a Master's degree in History and a Master's degree in Climatology.

Before beginning his 42 years with DWR, Don taught history at Sacramento State, then he worked as a Lab Technician for Speckles Sugar Factory. During Don's DWR career, he worked mostly for Central District in Climatology and as the manager of the District's Water Well Driller Report Program (well logs) covering the District's 24 counties. Don also provided hydrologic data on weather and rainfall to the Department's reports. He retired from DWR in 2000. ■

DWR MISSION *Statement*

To manage the water resources
of California in cooperation
with other agencies,
to benefit the State's people,
and to protect, restore,
and enhance the natural
and human environments.

STATE OF CALIFORNIA • DEPARTMENT OF WATER RESOURCES

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